

H. M. ROUNDS.

SWIVEL.

APPLICATION FILED AUG. 16, 1907.

913,056.

Patented Feb. 23, 1909.

Fig. 1.

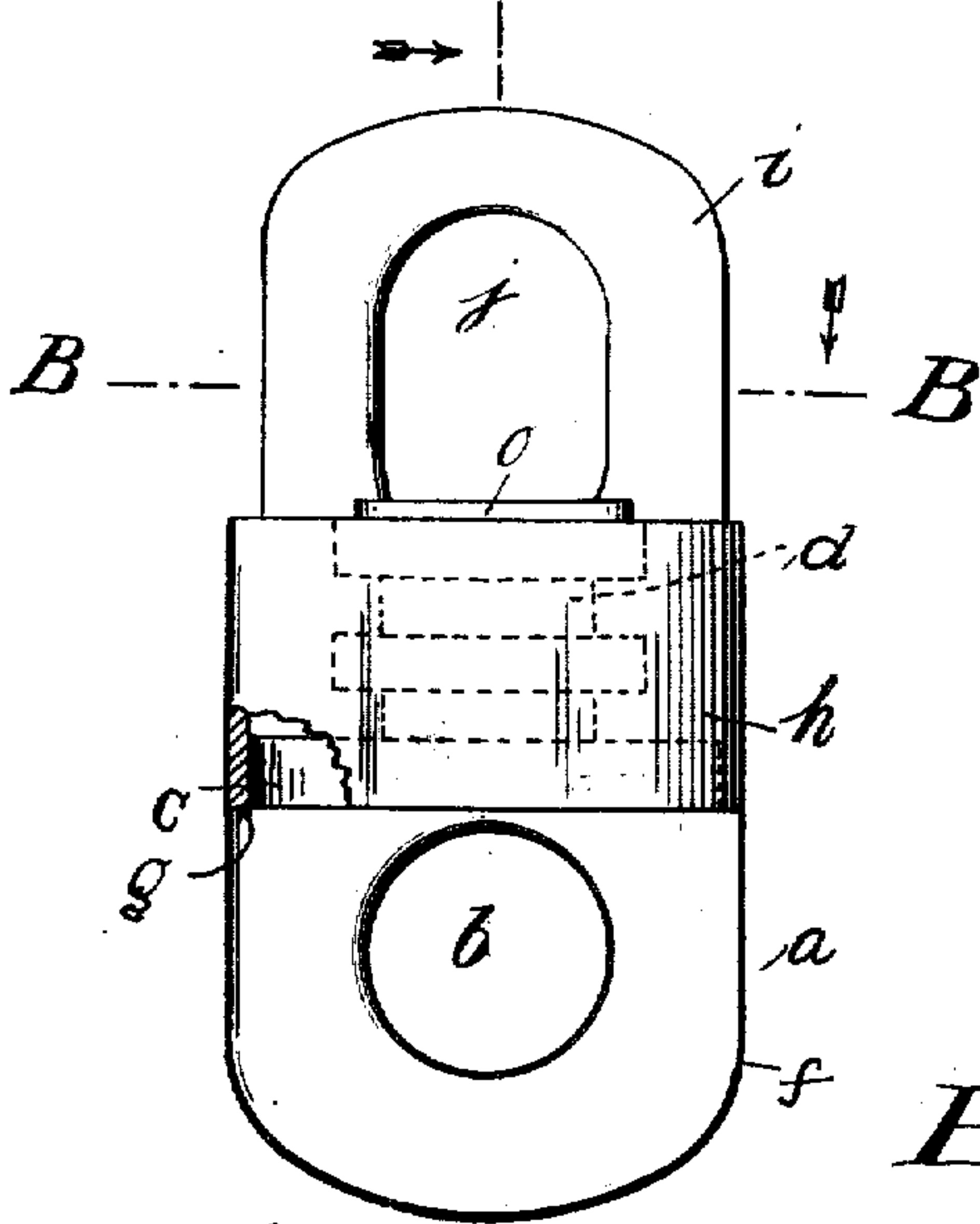


Fig. 2.

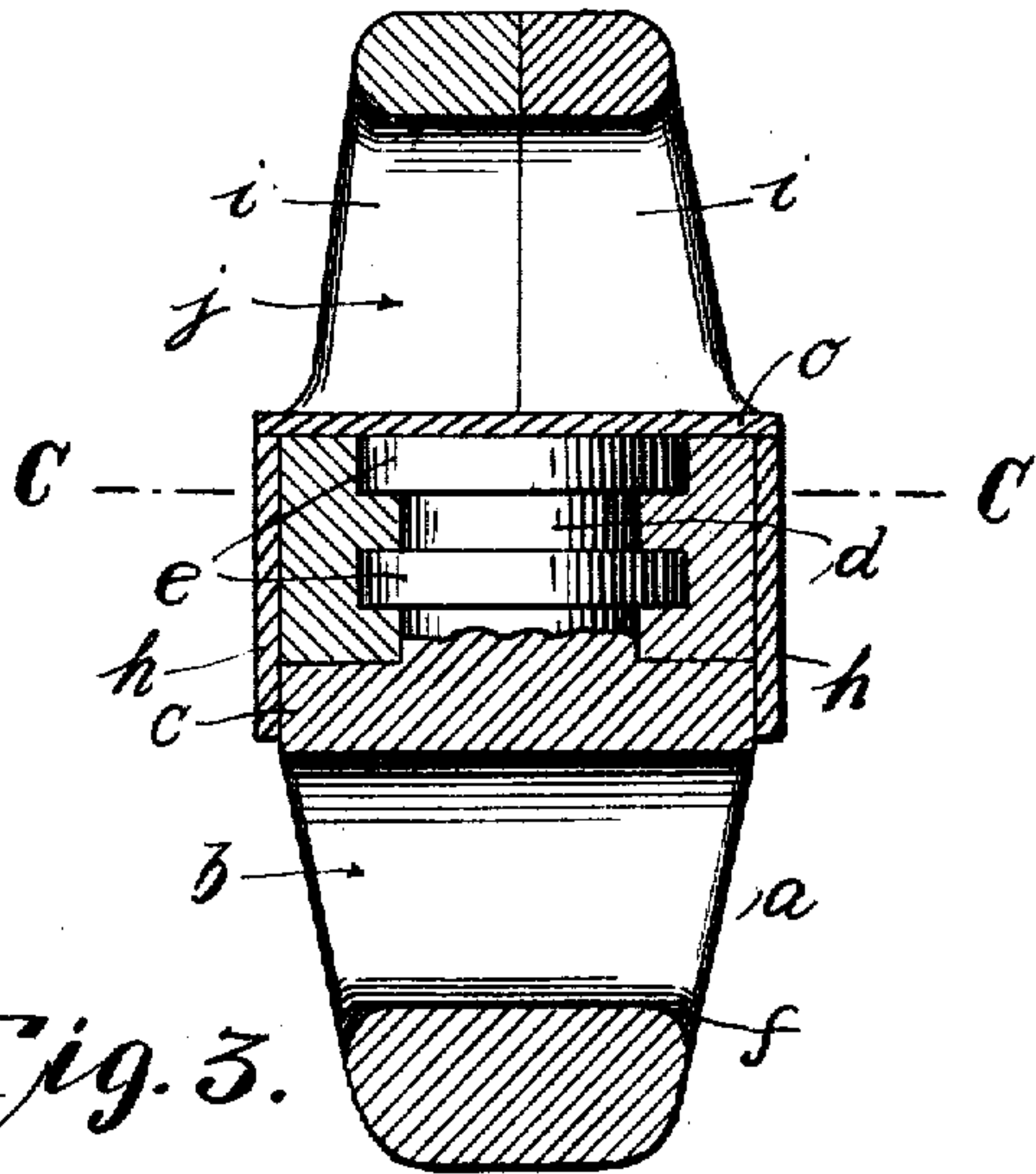


Fig. 3.

Fig. 5.

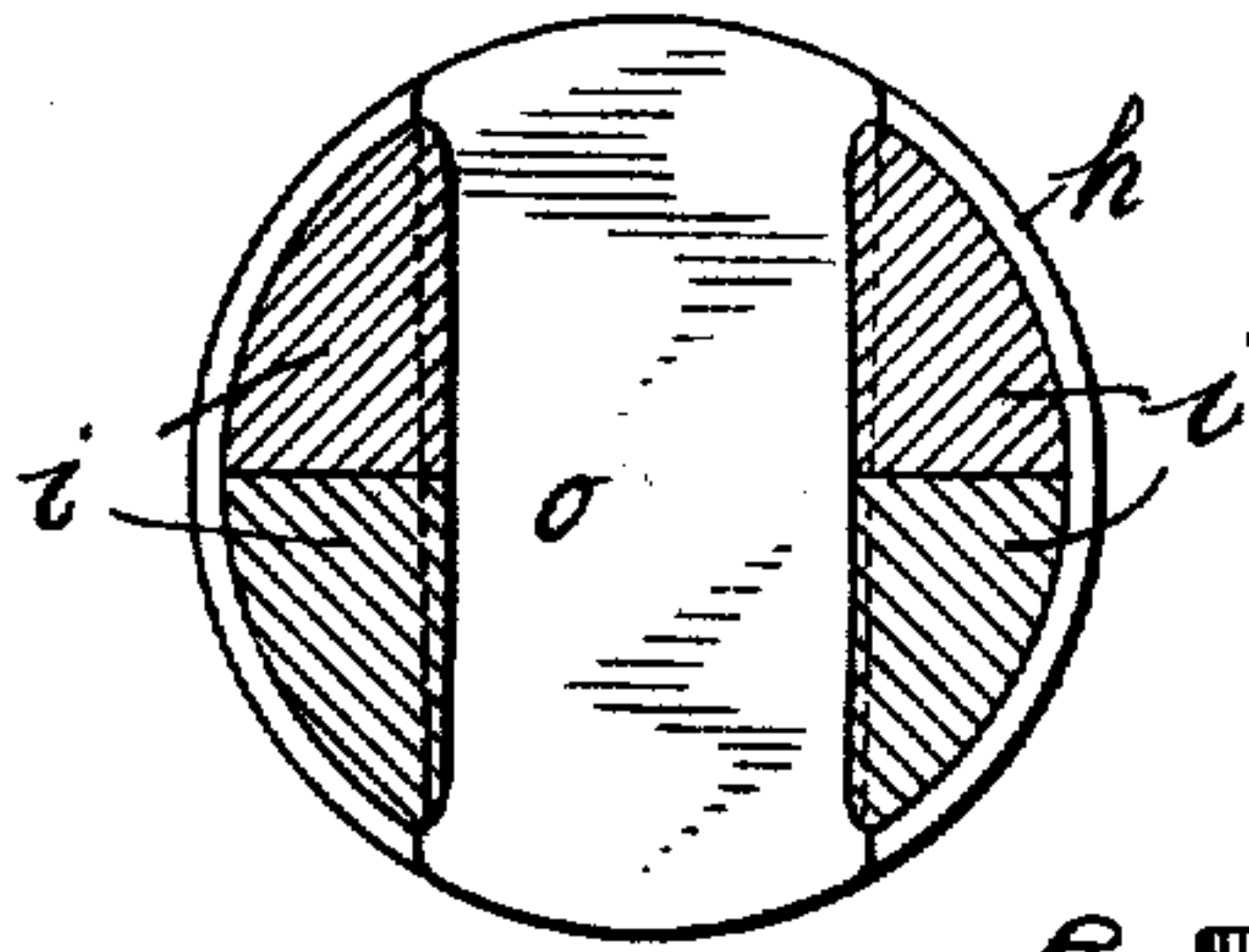
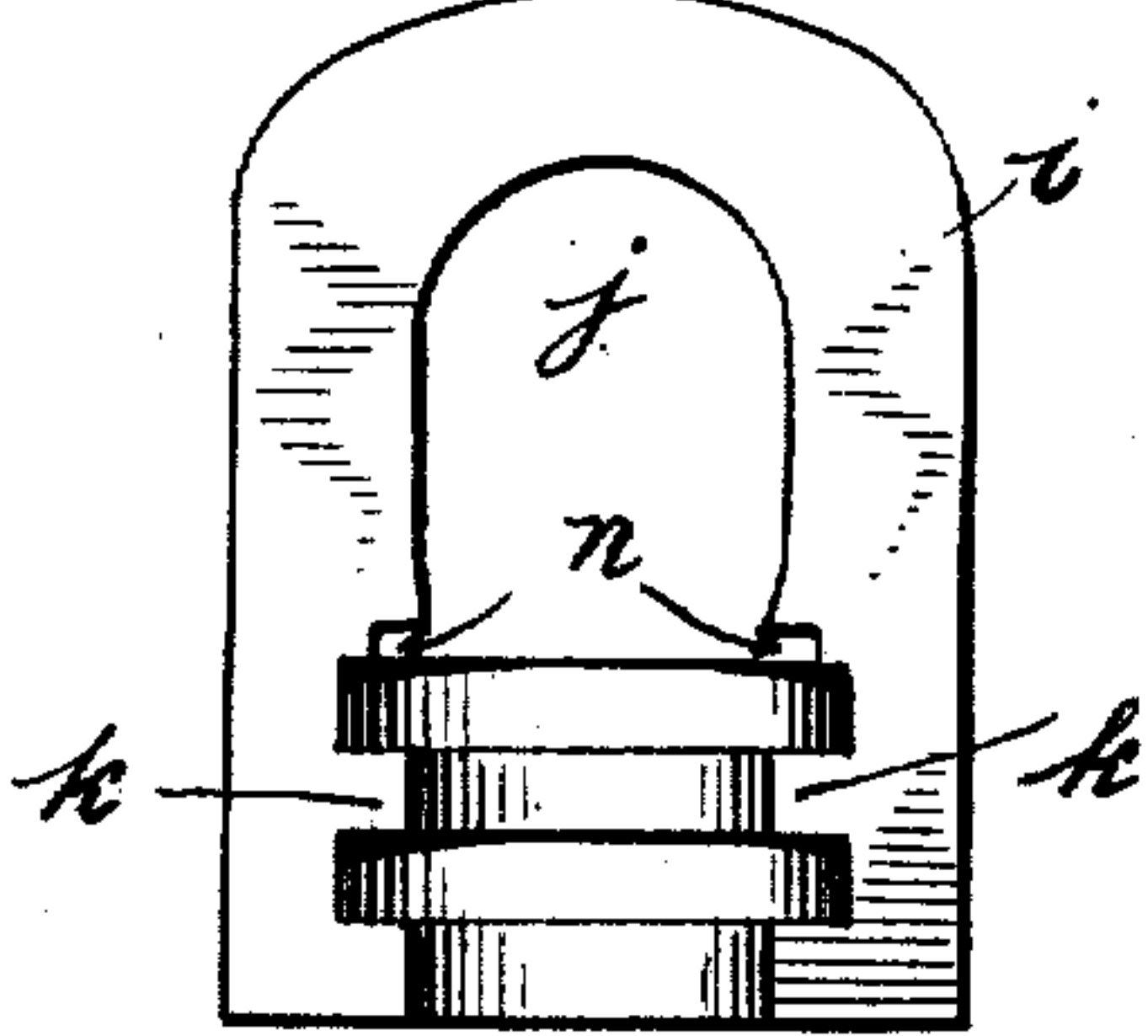


Fig. 7.

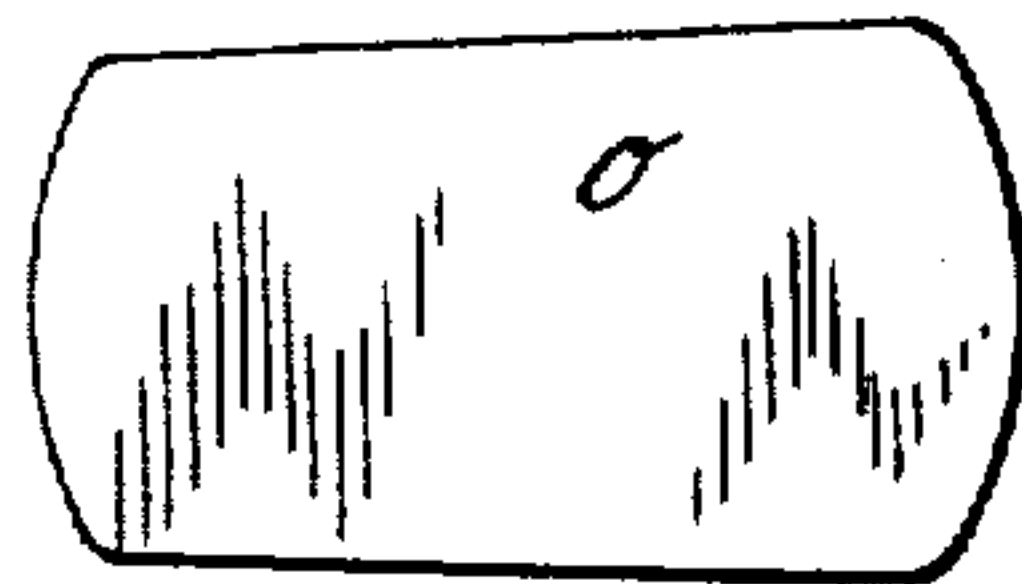


Fig. 4.

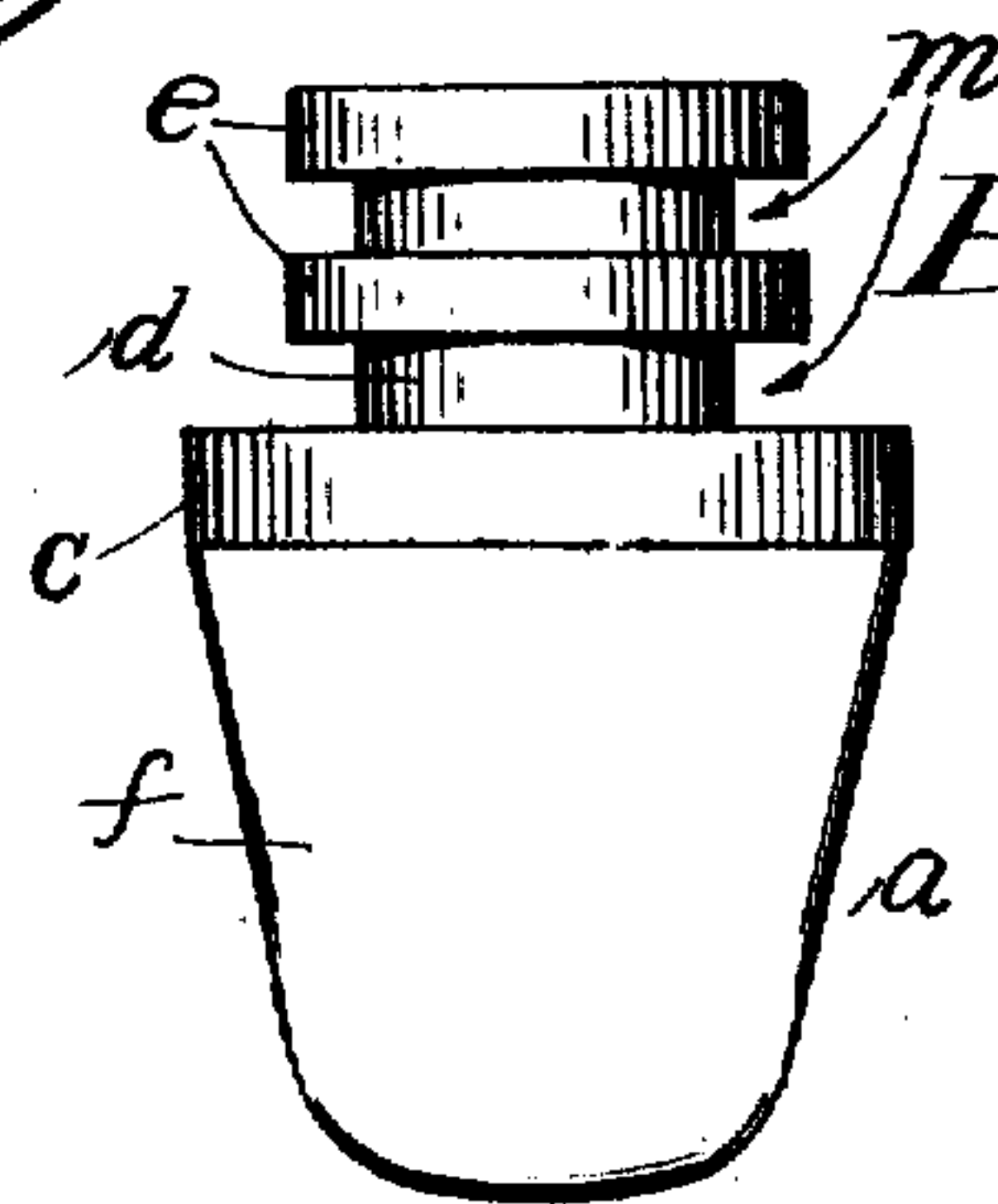
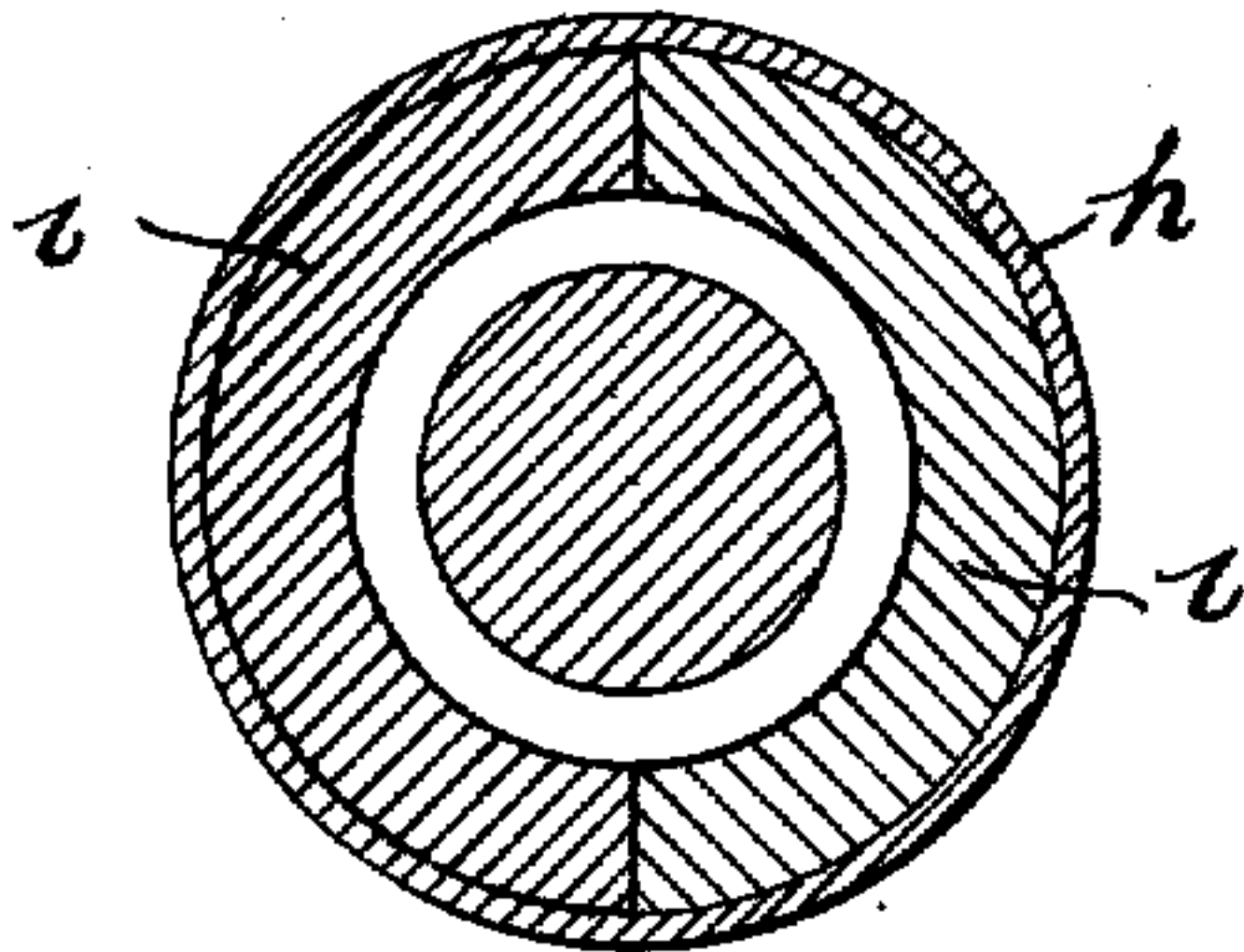


Fig. 6.

Witnesses:  
Harry C. Hebig  
M. Hamilton.

Horace M. Rounds Inventor  
By his attorney  
James Hamilton



# UNITED STATES PATENT OFFICE.

HORACE M. ROUNDS, OF CORRY, PENNSYLVANIA, ASSIGNOR TO WARREN AXE & TOOL COMPANY, OF WARREN, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

## SWIVEL.

No. 913,056.

Specification of Letters Patent.

Patented Feb. 23, 1909.

Application filed August 16, 1907. Serial No. 388,781.

*To all whom it may concern:*

Be it known that I, HORACE M. ROUNDS, a citizen of the United States, residing at Corry, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Swivels, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in swivels; and an object of my invention is to provide a swivel which will admit of ready repair in the woods or field far from and without resort to a blacksmith shop; which will not catch against rocks, logs, block pulleys and like obstacles and which, therefore, may be drawn flat along the ground; in which the parts are so shaped that under the stress of the pull, they are drawn together; in which the draw-heads are effectually protected from dirt and from contact with the line or link and are kept constantly lubricated and in line with each other; and which is particularly well adapted to withstand side strain.

One feature of my new swivel lies in the provision of a retaining band which is seated upon a shoulder formed upon the eye-stem of the swivel and is held in place by a key of wedge or tapering shape which, in addition to retaining the band in place, excludes dust and dirt from the draw-heads, acts as a fermature for the lubricant, holds the two draw-heads in exact relation to each other, providing an even surface at all times for them, and prevents the link or line from rubbing against the draw-head opposed to the link.

Another feature of my new swivel resides in the conical or tapering shape of the eye stem and the loop stem, both of which taper from the draw-head end to the outer end. This shape insures that the swivel will pass easily over the pulley or sheave of a block. Further, since the swivel is thicker at the retaining band or center than at either end, the swivel will pass and avoid obstacles and will work easily, when drawn flat along the ground.

A third feature of my new swivel is that it is about one third shorter than swivels heretofore made, whereby the leverage is reduced and the swivel is adapted to be passed over and around pulleys, logs and other parts of a curved shape without breaking

under the side strain produced. My new swivel is further adapted to withstand side strain by reason of the two-part construction of its draw-head, the wide shoulder formed on the eye-stem and the seating of the retaining band upon that shoulder.

A fourth feature of my new swivel consists in the provision of a double or two-part draw-head, whereby the strain is distributed and the parts of the swivel are prevented from sticking or "freezing", as it is commonly called, due to the metal of the two parts flowing under the great stress of a heavy pull.

A fifth feature of my invention is found in the construction of the main drawing parts, the loop stem being split lengthwise and its parts being held together not only by the retaining band but by the pull on the draft line which passes through the loop. In fact, when the pull is exerted, the parts of the loop-stem are so pressed together as to relieve the retaining band from stress and wear and the band really serves to retain the parts of the loop-stem in place only while no pull is being exerted on the cable.

In my new swivel the strain is distributed entirely around the swivel, instead of being confined to one or two narrow points.

In the drawings illustrating the principle of my invention and the best mode now known to me of applying that principle, Figure 1 is an elevation of my new swivel, the parts being assembled; Fig. 2 is a central longitudinal section on the line A A of Fig. 1; Fig. 3 is a section on the line B B of Fig. 1; Fig. 4 is a section on the line C C of Fig. 2; Fig. 5 is an inside elevation of one part of the two-part loop-stem; Fig. 6 is a view of the eye-stem looking towards the right in Fig. 1; and Fig. 7 is a detail of the key.

The eye-stem *a* is formed with an eye *b* and from the stem proper *c* extends a draw-head *d* formed with the ring-shaped or annular flanges *e*. The body part *f* is formed with a shoulder *g* which extends inwardly to meet the stem proper *c* at its base; and upon the shoulder *g* is seated a retaining band *h*. The latter holds together the two parts of the loop-stem *i* one half of which is shown in Fig. 5 and is there shown to be formed with an opening *j* for the draft line or link and with two inwardly-projecting semi-circular flanges *k* which,



when the parts are assembled, fit into the grooves *m* between the annular flanges *e* on the draw-head of the eye-stem (Figs. 2, 5 and 6). So far as known to me no swivel  
5 has heretofore been made with a two-part draw-head, the two-part construction serving to distribute the stress and to prevent "freezing" of the parts.

Each part of the loop-stem is formed with  
10 a groove *n* at each side at the base of the opening *j* and into these grooves *n* is slipped the key *o* (Fig. 7). The latter serves not only to retain the band *h* in place but it also acts to prevent leakage of the  
15 lubricant from the draw-head, to exclude dirt therefrom, to hold the loop-stem and the eye-stem in exact relation, providing an even surface at all times for the draw-heads and to prevent the link or draft-line from  
20 abrading the latter.

As is best shown in Figs. 2 and 6, the eye-stem and the loop-stem both taper towards the outer end, leaving the thickest part of the swivel at the retaining band and giving  
25 to the ends of the swivel a conical or tapering shape which permits the swivel to pass obstacles without engaging them, when it is drawn flat along the ground. Further, the two-part construction of the loop-stem  
30 parts causes the parts to be drawn together by the pull on the draft line engaging them, thereby relieving the band *h* of any stress tending to wear or deform it.

The shoulder *g* in combination with the  
35 retaining band *h* serves to exclude dirt and other foreign matter from the draw-heads. Further, it similarly aids to resist side stress, in which function it is assisted by the two-part construction of the draw-head. This

strength to resist side strain enables the  
40 swivel to be passed over pulleys, logs and the like having rounded contours, in the attainment of which result the tapering shape of the ends of the swivel aids.

I claim:

1. A swivel consisting of a pair of stems, one of which is formed with a draw-head and the other of which is multi-part and fits over said draw-head; a retaining band which encircles one of said stems and holds the  
50 same in operative relation to the other of said stems; and a key which engages said multi-part stem and covers the free end of said draw-head; said key serving to hold  
55 said retaining band in place and in conjunction with the latter to act as a fermeture for the lubricant and to exclude dirt.

2. A swivel consisting of a pair of stems one of which is formed with a draw-head and a shoulder and the other of which is  
60 multi-part and fits over said draw-head; a retaining band which encircles one of said stems and bears against said shoulder; and a key which engages said multi-part stem and passes over said band and the free end  
65 of said draw-head; said key holding the other parts in operative relation and said band in conjunction with said shoulder serving to resist side strain.

In witness whereof I have hereunto set my  
70 hand at said Corry this 3rd day of August A. D. 1907, in the presence of the two undersigned witnesses:

H. M. ROUNDS.

Witnesses:

LEE L. SMITH,  
BYRON F. BABBITT.