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H. WISBAUER

ROPE CLIP

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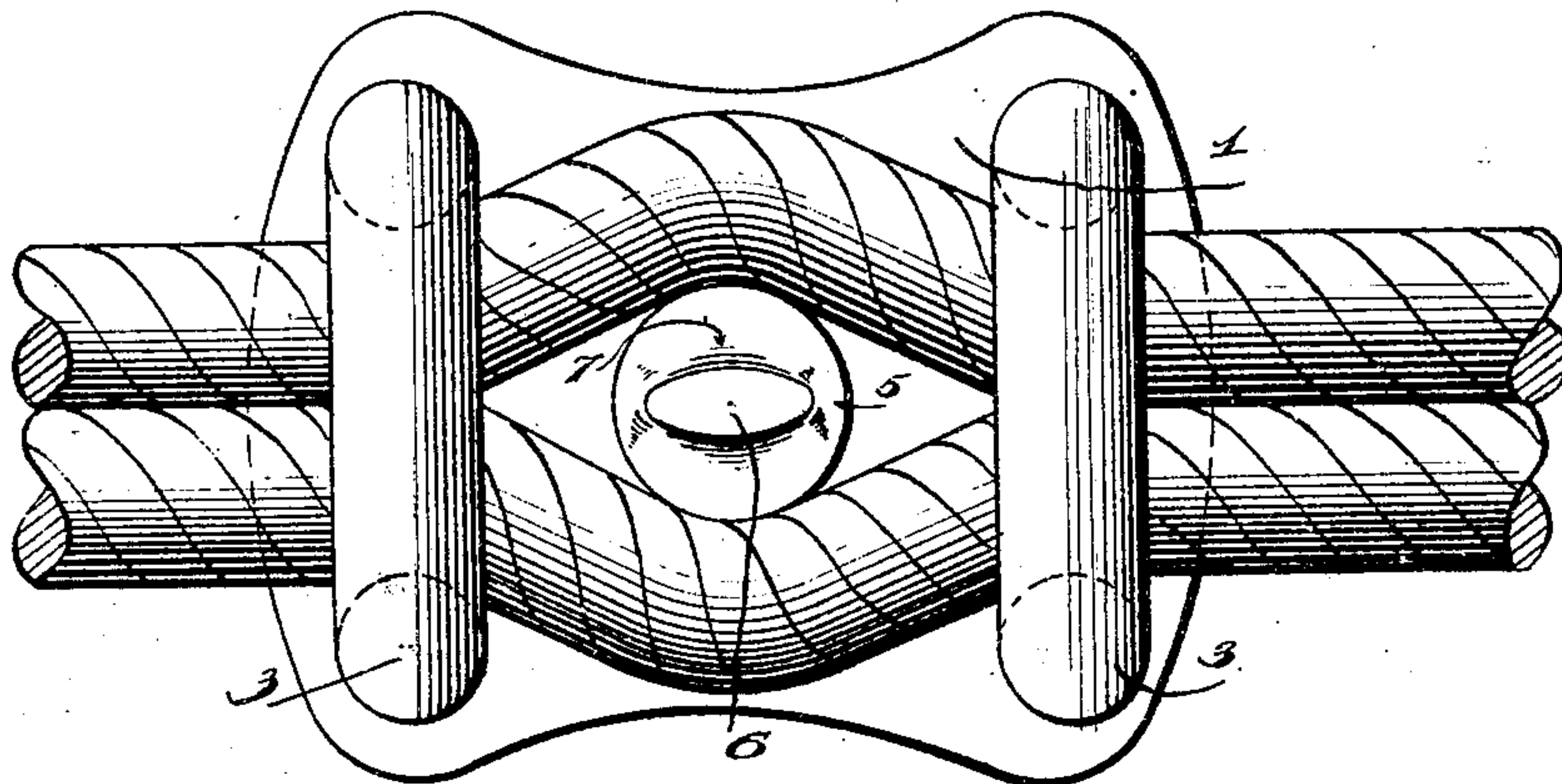


Fig. 1

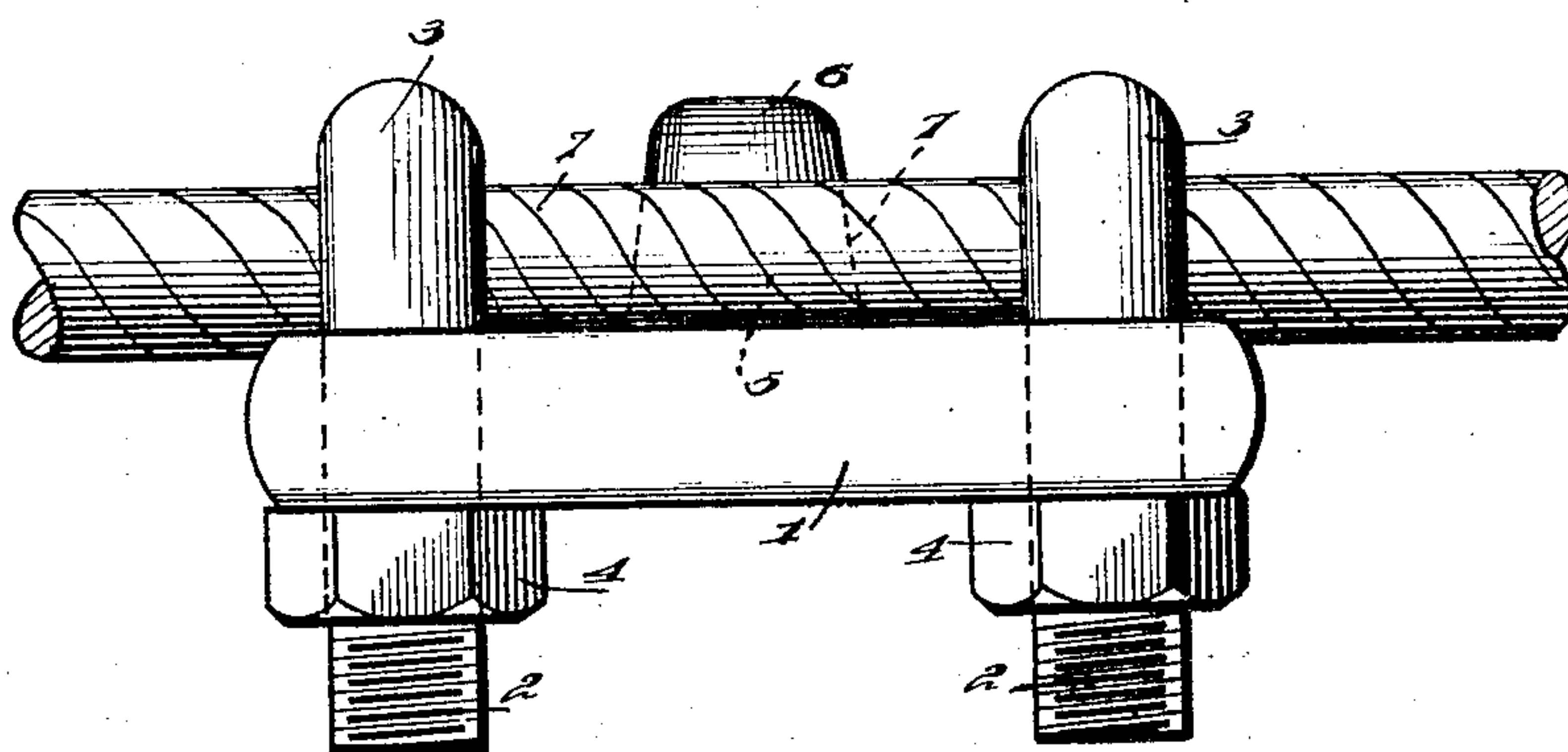


Fig. 2

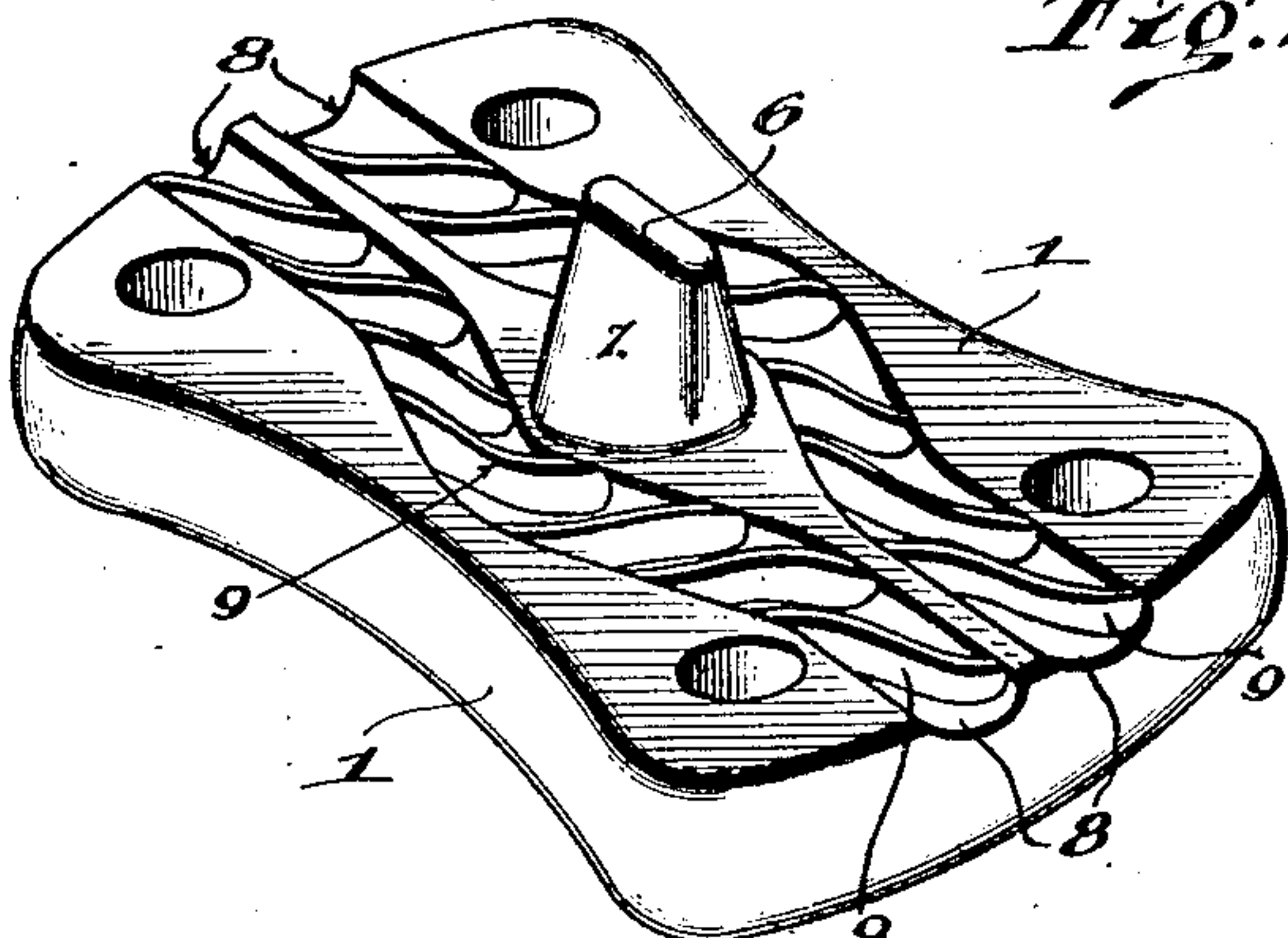


Fig. 4

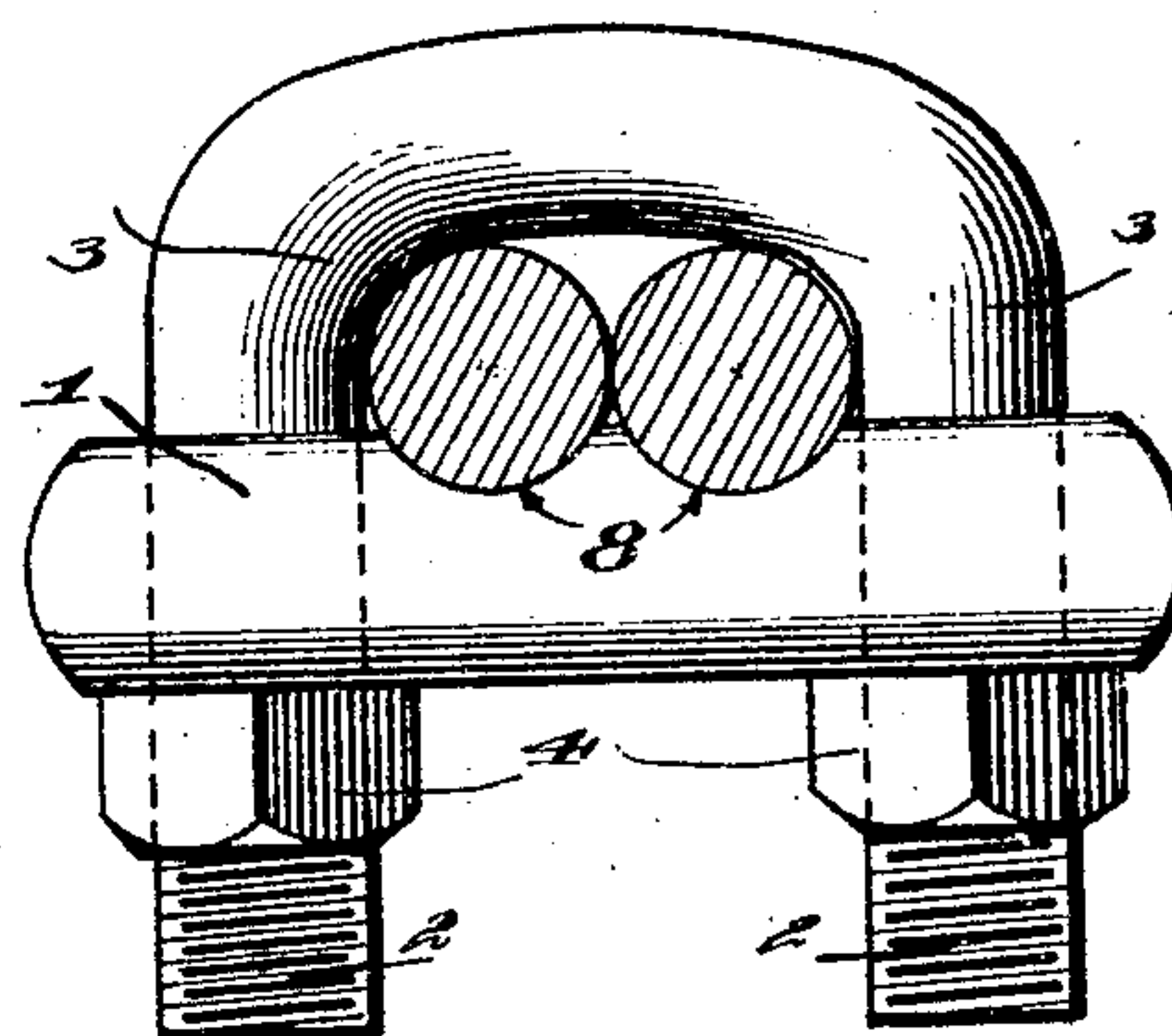


Fig. 3

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## UNITED STATES PATENT OFFICE.

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## ROPE CLIP.

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This invention relates to clips, so-called, which are used for joining and holding strands of rope, cable, etc., and has for its object the provision of a holding clip of simple construction providing among other features means for bending or cramping the rope held in the clip.

The invention has a further object, the provision of a holding clip providing opposed spaced clamping means for parallel strands of rope, etc., with intermediately positioned means for spreading oppositely outward, the strands to cramp them relatively to said clamping means. Such a construction provides a clip for joining and holding the strands of wire, rope, cable, etc. for rope end loops, and splices, for example.

A preferred embodiment of the invention is described in the following detailed specification, when read with reference to the accompanying drawings forming part thereof and in which:

Figure 1 is a top plan view of a holding clip constructed in accordance with the present invention with a double strand of cable clamped and held wedged thereon.

Figure 2 is a side elevation of said clip as shown in Figure 1.

Figure 3 is an end elevation of the clip, and

Figure 4 is a perspective view of the clip with cables and clamping bolts removed.

Referring to these drawings, 1 indicates an elongated plate having dual perforations adjacent to its opposite ends and in alinement through which the threaded feet 2 of U bolt clamps 3 are inserted, these clamps being drawn down upon the plate by means of the usual nuts 4 at the under side of the plate 1. The top face of this plate is grooved longitudinally to form twin tortuous grooves or seats 8 having spiral ribs 9. At a point intermediate of the clamps 3 in the center line thereof, a stud 5 extends upwardly from the top face of the plate 1, the sides of this stud tapering upwardly and inwardly to present an elongated or oval tip 6 from which the sides of the stud flare downwardly and outwardly as wedging surfaces 7. The elongated tip 6 is instrumental in permitting the strands of cable or rope to be guided thereby, and forced down into the grooves 8 over the inclines 7 of the stud with the result that the normally parallel strands are spread apart by the taper or wedging inclines 7 of

the stud and cramped in the eye bolts 3 which, obviously, are drawn downwardly over and embrace and clamp the parallel strands passing therethrough by means of the clamping nuts 4 as usual. It is to be understood that the described cable or rope holding clip is to be made with its wedging stud and U bolt clamps sized for different diameters of rope or cable, so that the spreading effect of the stud on the strands of rope between the U bolt clamps is effective to cramp the strands relatively to the U bolt and will substantially increase the holding power of the clip. The form of the spreading or cramping member may be varied, the illustrated form being intended as illustrative and not as restrictive. The operation of threading strands of wire or cable through the eye bolts and the spreading of the rope to force it down over the inclined sides of the stud will be obvious and needs no detailed description. The cramping action of the interposed wedging member is effective to bind or lock the strands against loosening through heavy strain and the simple construction providing these results enables the clip to be manufactured on a very economical basis.

The grip of the clip on the rope or cable is made doubly effective by means of the tortuous grooves 8 and their spiral ribs 9. Holding clips, as previously used, have used spiral corrugations without providing for a cramping bend in the cable serving to wedge or bend the cable or rope strands with these ribs or corrugations. As a result the cable, not being so cramped, is caused to turn under holding strain and follow the corrugations, thereby pulling through the clip.

By cramping the cable through the stud 6 or its equivalent, I make the spiral ribs or corrugations effective to resist loosening pull instead of tending to aid it. Additionally, the pull or tension on the cable is transmitted to the base through the ribbed grooves.

Having described the invention, what I claim and desire to secure by Letters Patent is:

1. In a device of the character described, a base carrying adjacent to its opposite ends transversely extending inverted U-bolt clamps and having upstanding centrally therefrom between said U clamps, a strand spreading stud.

2. In a device of the character described, a plate having rope embracing and clamping



bolts extending transversely thereof adjacent to its opposite ends and having intermediate of said ends and substantially centrally thereof, wedging means upstanding  
 5 from the plate and positioned thereon to enter between and spread apart adjacent strands.

3. In a device of the character described, a base plate, a pair of eyes mounted on said  
 10 plate in alined spaced relation longitudinally thereof to clamp abutting parallel strands to the plate, and a spreading means on the plate upstanding between said eyes and insertible between the adjacent strands to  
 15 spread and hold them apart in cramped relation to the eyes.

4. In a device of the character described, a plate mounting in spaced alined relation, a pair of inverted U bolt clamps to receive and  
 20 clamp on the plate abutting parallel strands, and a wedging stud positioned on the plate between the U bolts and insertible between said parallel strands to bend and hold them outwardly in opposite directions and thereby  
 25 to cramp the strands in the U bolt clamps.

5. In a device of the character described, a plate mounting in spaced alined relation, a pair of inverted U bolt clamps to receive and clamp on the plate abutting parallel strands,  
 30 said plate having centrally thereof upstanding between the U bolt clamps a stud having an elongated tip insertible between adjacent strands and downwardly and outwardly tapering sides to wedge the engaged strands

oppositely outward thereby cramping the 35 strands relatively to the U clamps.

6. In a device of the character described, a base traversed by cable clamping bolts adjacent to its opposite ends and having a tortuous groove therein to receive the cable, and  
 40 a cable cramping member upstanding from said base between said end clamping bolts and effective to bend and seat the cable in its groove.

7. In a device of the character described, a  
 45 base traversed by cable clamping bolts adjacent to its opposite ends and having a pair of tortuous grooves formed in its face, and wedging means positioned on the plate between the end clamping bolts and between  
 50 said grooves effective to engage between parallel strands to bend and hold them outwardly in opposite directions seated in their grooves.

8. In a device of the character described, a  
 55 base traversed by cable clamping bolts adjacent to its opposite ends and having a pair of tortuous grooves formed in its face, provided with spiral cable gripping ribs, and wedging means projecting upwardly from the base be-  
 60 tween said end clamping bolts and between said grooves, and insertible between parallel strands of cable to cause them to bend oppositely outward and down into their grooves.

Signed at Columbus in the county of 65 Franklin and State of Ohio this 3rd day of October A. D. 1927.

HOWARD WISBAUER.