

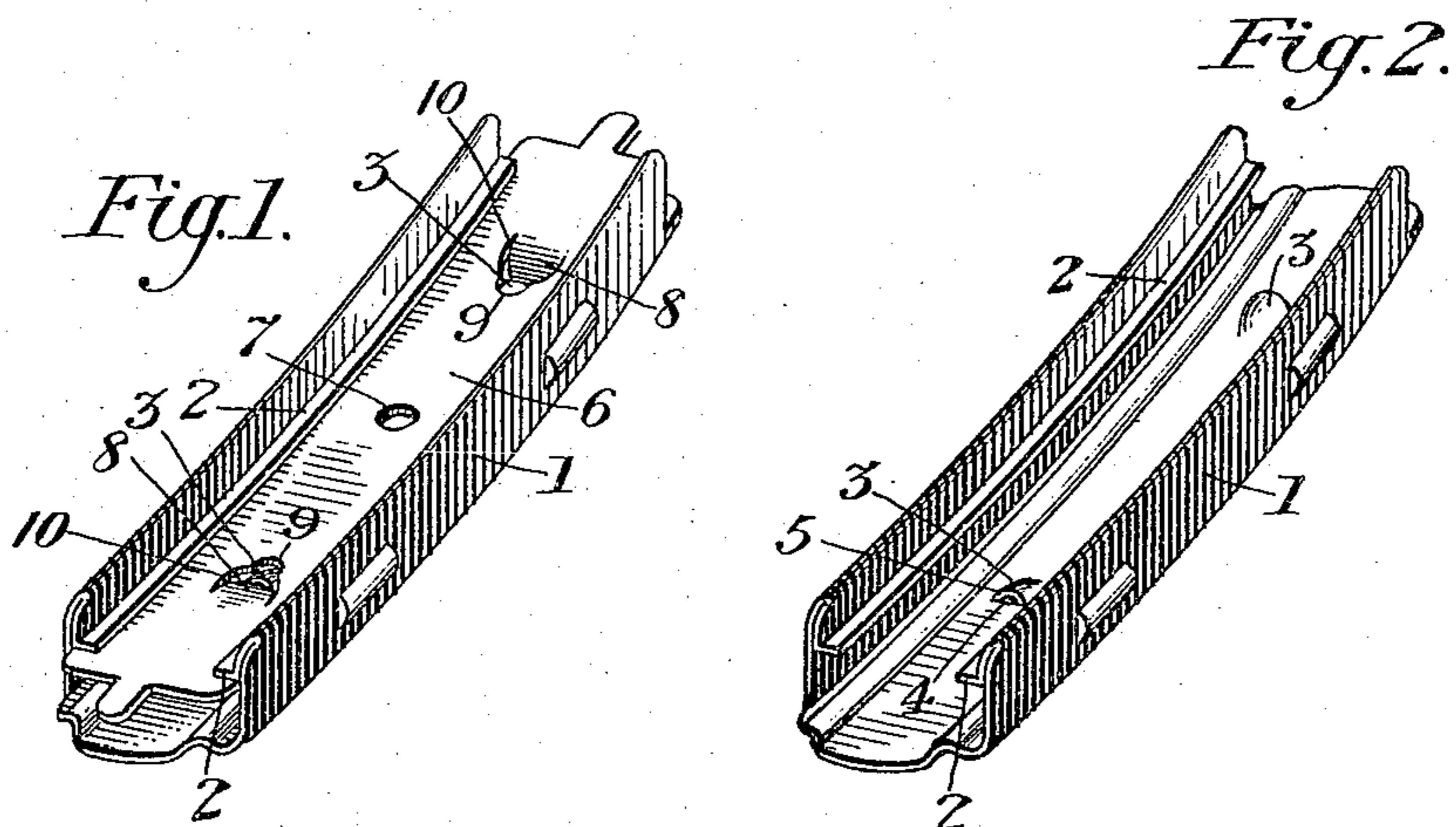
No. 782,556.

PATENTED FEB. 14, 1905.

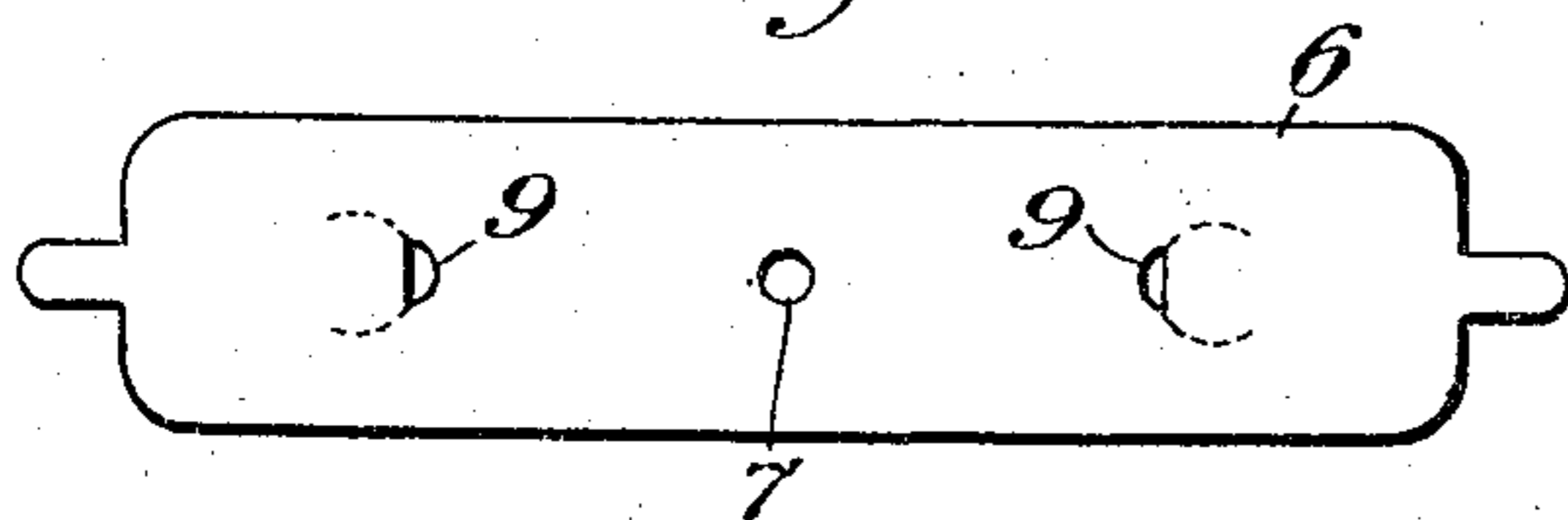
J. H. GOSS.

CARTRIDGE CLIP.

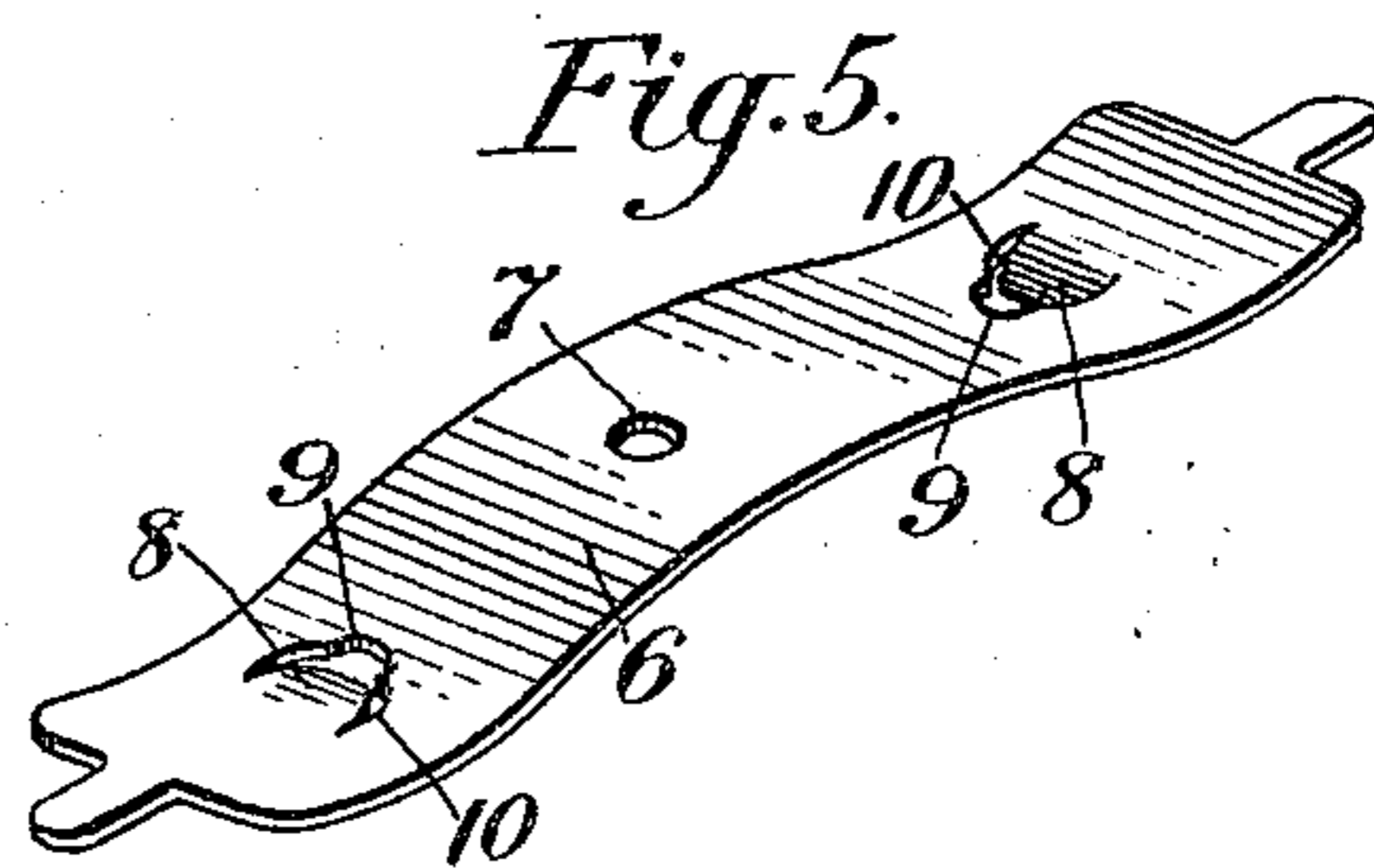
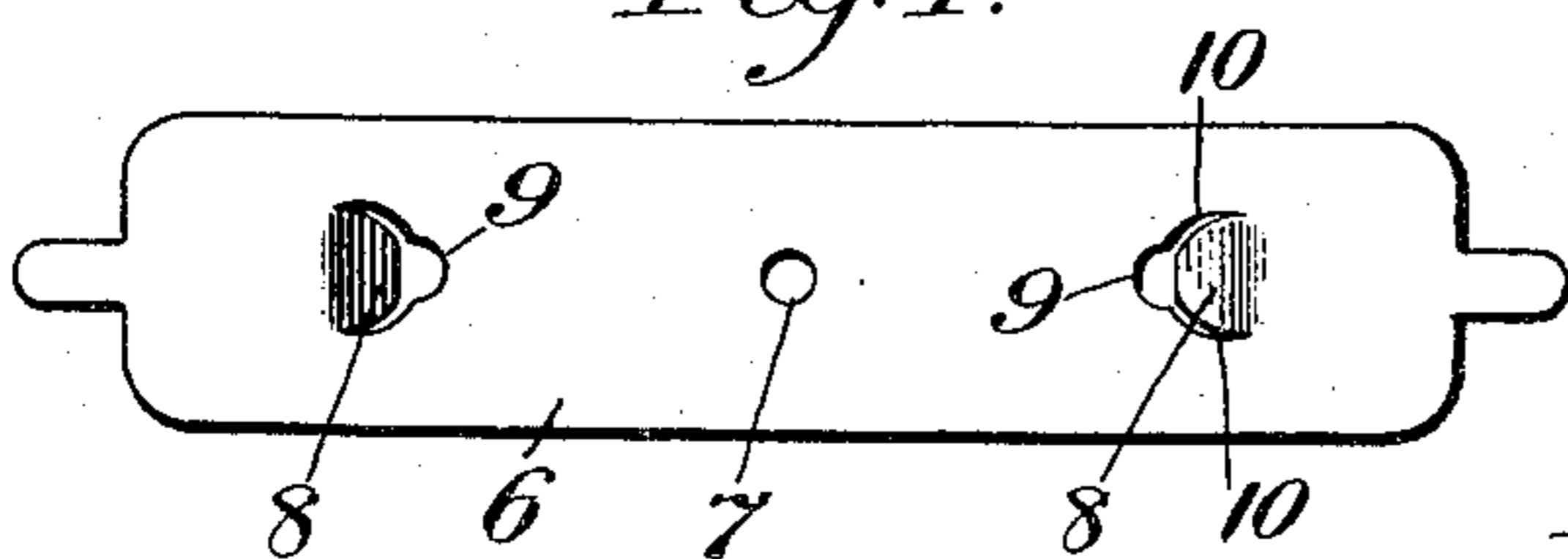
APPLICATION FILED JUNE 15, 1904.



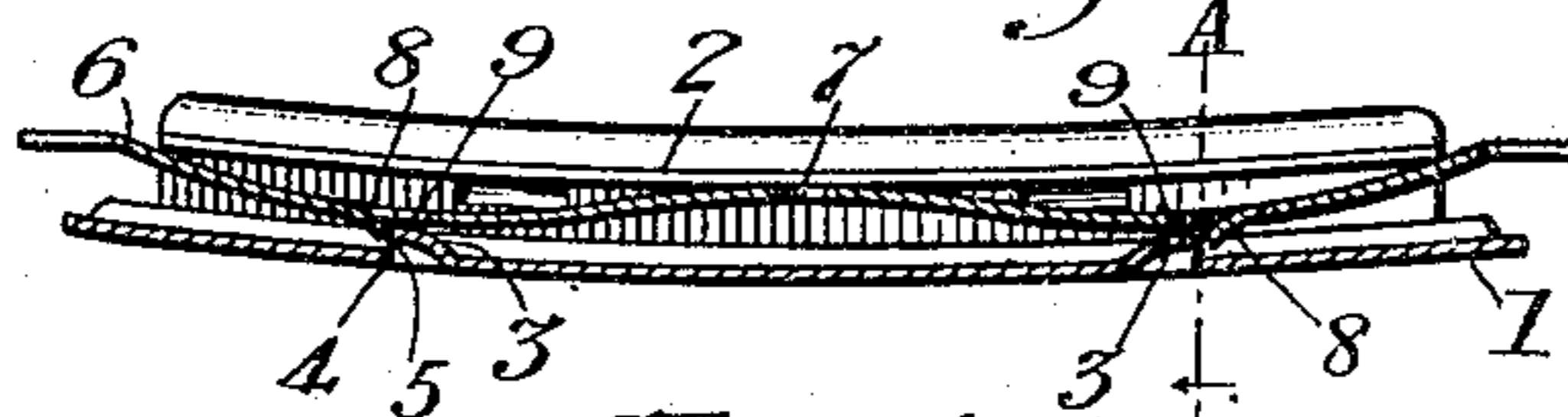
*Fig. 3.*



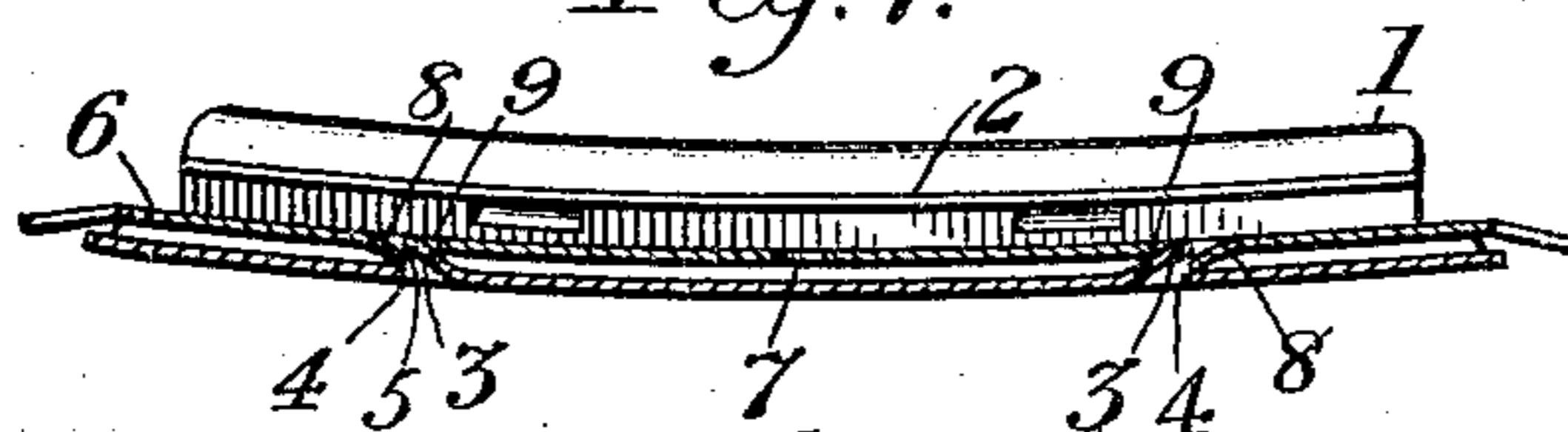
*Fig. 4.*



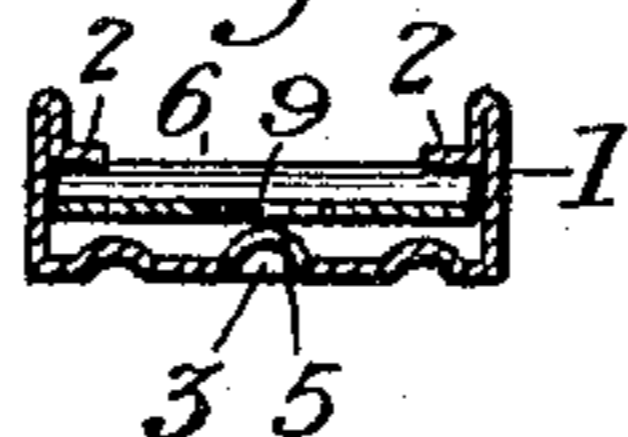
*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



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Inventor:  
John H. Goss  
by W. H. Finckel Atty.

# UNITED STATES PATENT OFFICE.

JOHN H. GOSS, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO SCOVILL MANUFACTURING COMPANY, OF WATERBURY, CONNECTICUT, A CORPORATION OF CONNECTICUT.

## CARTRIDGE-CLIP.

SPECIFICATION forming part of Letters Patent No. 782,556, dated February 14, 1905.

Application filed June 15, 1904. Serial No. 212,641.

*To all whom it may concern:*

Be it known that I, JOHN H. GOSS, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented a certain new and useful Improvement in Cartridge-Clips, of which the following is a full, clear, and exact description.

The object of the invention is to provide a cartridge-clip with a spring which is practically incapable of longitudinal movement after the clip is once loaded and will hold the cartridges in position at all times and ready to be inserted in the magazine of the gun.

Prior to this invention it was old to provide the case of the cartridge-clip with upturned lips and the spring with downwardly-projecting tongues to cooperate with these lips to prevent endwise or longitudinal movement of the springs.

The present invention relates to clips of this general character, but of improved construction and greater efficiency.

The invention consists of a cartridge-clip case having transverse slits in its bottom at or near opposite ends, the metal of the case adjacent to the slits being punched upwardly into the case without rupture so as to form convex lips of opposite inclination at opposite ends of the case, these lips cooperating with downwardly-projecting tongues on the spring, first, to prevent the longitudinal or endwise movement of the spring, and, second, to preclude the projection of the tongues outside of or through the openings in the case.

The invention further consists of a cartridge-clip spring provided with downwardly-projecting tongues having straight tips and curved or straight sides and accurately spaced apart, and these springs are produced from a strip of spring metal, such as brass, which is first centered, and then holes spaced equidistant from the center are cut, forming the tips of the tongues, and then the sides of the tongues are cut, the segmental or equivalent excisions enabling the punches used in cutting the tongues to withdraw from the metal freely or, in other words, permit-

ting the ready stripping of the blanks. Simultaneously with the completion of the tongues the spring is given a curve necessary to fit it for use in the clip.

The invention specifically comprises also the combination of a cartridge-clip case having the uncut convex lips, and a spring having accurately-positioned tongues constructed with straight-edged tips and sheared sides.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a perspective view of the case and spring. Fig. 2 is a perspective view of the case. Fig. 3 is a plan view of a spring-blank. Fig. 4 is a plan view of the spring after the tongues are cut. Fig. 5 is a perspective view of the finished spring. Fig. 6 is a longitudinal section of the clip in position for use. Fig. 7 is a longitudinal section showing the spring depressed without interference with the lips of the case. Fig. 8 is a transverse section taken substantially in the plane of line A B, Fig. 6.

The case 1 may be of any approved construction, having longitudinal flanges 2 to engage the spring; but the lips 3 of the case for cooperation with tongues on the spring to hold said spring against longitudinal movement are formed in a novel manner in that instead of being in the form of holes in the bottom of the case or in the form of upwardly-projecting pieces cut from the said bottom on parallel sides and one end, as heretofore, they are made by slitting the bottom of the case transversely, as at 4, and punching up the adjacent metal of the bottom in the form of convex lugs or hollow lumps, rising from the bottom of the case in opposite directions and presenting at their outer higher ends, as shown in Figs. 2 and 8 particularly, convex abutments 5, against which the tongues of the spring are arrested. It is to be noted that the sides of the lips are not severed from the bottom, but that only the edges of the abutments 5 are severed, and otherwise the lips retain their integrality with the bottom. Hence while these lips rise above the upper

level of the bottom of the case they do not present openings in said bottom through or into which by any possibility the tongues of the spring may pass, and therefore they positively arrest and prevent any longitudinal movement of the spring once it is in place, and as a result the cartridges are held securely in the clip and the loaded clip may be handled without fear of accidental dislocation. Further, by this construction it is easier to keep the tools in shape and preserve accurate dimensions of parts. In practice some difficulty has been experienced in properly locating the tongues on the springs so as to cooperate accurately with the restraining devices on the case to prevent longitudinal movement of the spring therein. Further, in those springs having tongues cut in them the springiness of the metal has impeded the withdrawal or stripping of the cutting-punches, especially when the bending of the spring is done simultaneously. The present invention overcomes both objections.

In making the spring 6 a hole 7 is formed, which serves as a center for locating the tongues 8, and in order to fix this location it is preferred to form simultaneously with the formation of this hole the holes 9 equidistant from it, as shown in Fig. 3. If these holes 9 be segments of circles, as shown, their chords form square or straight-edged tips on the tongues 8, as indicated especially in Figs. 3 and 4; but obviously the holes may be of other shapes, and consequently the tongues have other than straight-edged tips. The opposite sides 10 of the tongues are shown as formed by cuts in the spring substantially in the shape of arcs of circles; but the invention is not limited to the shape of the sides of the tongues so long as the tongues are free from the spring at their front or leading ends and opposite sides, but remain attached to the springs at their other ends. The punching of the tongues and their downward deflection and the curving of the spring, as indicated in Fig. 5, may be effected simultaneously by suitable mechanism. The segmental holes 9 provide for the easy withdrawal of the punches and the stripping off of the spring therefrom, so that the spring with its depending tongues is capable of being economically, quickly, and accurately manufactured.

In assembling the spring in a case it is slipped in endwise beneath the overhanging flanges 2, and since the leading tongue is inclined in a direction to cause it to yield as the spring advances over the lips the said tongue will easily pass over the edge 5 of the lip first met with and as easily ride over the back of the farther lip, and then both tongues being opposite the respective lips they spring down into engagement with the abutment portions of the said lips, and so the spring is held from further longitudinal movement in either direction. After the cartridges are in place and the spring

thereby depressed the tips of the tongues are forced into contact with the abutments, as in Fig. 7. As indicated, the location or position of the tongues is accurately determined in the first instance, so as to make a close fit with the lips of the case, and thus promote the purpose of preventing longitudinal movement of the spring after it is once in place and the cartridges inserted in the clip.

The insertion of the cartridges within the clip has a tendency to flatten out the spring, as indicated in Fig. 7, and in the constructions heretofore used this flattening out of the spring is somewhat interfered with by the tongues and lips coming into contact. In the present invention the holes 9 and the openings made in the spring from which the tongues are turned out afford spaces into which the lips project when the spring is flattened to its maximum extent, and thus there is no interference between these two parts, and more tolerance can be taken in the variation of the depth of the case-lips without interfering with the proper working of the clips by making too much friction between the cartridges and the spring.

In manufacturing the springs the several holes are punched, blanks severed, the tongues cut and depressed, and the spring curved. The holes 7 and 9 serve as mediums for the reception of leader-pins, by means of which the blank is accurately positioned in the dies for making the various cuts, and hence uniformity and great accuracy of production are maintained. By using leader-pins for locating the blank so that its axis will be that of the three holes previously punched the shearing of the tongues and the bending of the spring can be performed without very close regard to this axis and still not interfere with the proper working of the assembled cartridges, case, and spring.

If convenience of assembling the case and spring were disregarded, the inclination of the lips and tongues might be arranged reversely to what is shown.

What I claim is—

1. A case for cartridge-clips, having transverse slits in its bottom near opposite ends, the metal of the bottom raised integrally adjacent said slits and forming convex abutments, combined with a spring having tongues to engage said abutments and thereby prevent endwise movement of the spring.

2. A cartridge-clip case, having its bottom slitted transversely, and convex lumps raised in the bottom of the case next the said slits, the edges of said lumps forming abutments to be engaged by tongues on the spring whereby longitudinal movement of the spring is prevented, combined with a spring having tongues and holes adjacent said tongues to receive the lumps when the spring is depressed.

3. A tongued spring for cartridge-clips, having a hole pierced in the center to enable

a leader to locate the relative positions of the tongues, the spring having openings also located by said centering hole and next the tongues, and the case having abutments co-  
5 operating with the openings and tongues.

4. A spring for cartridge-clips, having axially-arranged holes cut perpendicular to the axis, and tongues sheared from the most distant two holes, combined with a case having  
10 abutments engaged by said tongues.

5. A spring for cartridge-clips, provided near opposite ends with segmental holes, and tongues depressed from said holes and having straight-edged tips and sheared sides, combined with a case having abutments engaged  
15 by said tongues.

6. A spring for cartridge-clips, provided near opposite ends with segmental holes, and tongues depressed from said holes and having  
20 straight-edged tips and curved sides, combined with a case having abutments engaged by said tongues.

7. A spring for cartridge-clips, provided with a center hole, segmental holes arranged  
25 equidistant from said center hole and near the ends of the spring, and tongues having straight

edges formed of the chords of the segmental holes, and whose sides are arcs of circles, combined with a case having abutments engaged by said tongues. 30

8. A cartridge-clip, comprising a case, provided with upwardly-projecting convex lumps provided with abutment edges, and a spring having depending tongues provided with  
35 straight tips adapted to cooperate with the abutment edges of the lumps.

9. A cartridge-clip, comprising a case, having upwardly-projecting convex lumps provided with abutment edges, and a spring having depending tongues provided with straight  
40 tips adapted to cooperate with the abutment edges of the lumps, and segmental holes next said tongues, so that when the spring is depressed within the case, said holes clear the  
45 lumps.

In testimony whereof I have hereunto set my hand this 11th day of June, A. D. 1904.

JOHN H. GOSS.

Witnesses:

EDITH S. WOODRUFF,  
C. M. DE MOTT.

It is hereby certified that the residence of the patentee in Letters Patent No. 782,556, granted February 14, 1905, upon the application of John H. Goss, for an improvement in "Cartridge-Clips," was erroneously written and printed "New Haven, Connecticut," whereas said residence should have been written and printed *Waterbury, Connecticut*; and that said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 28th day of February, A. D., 1905.

[SEAL.]

F. I. ALLEN,  
*Commissioner of Patents.*