

G. H. PFEIL,
RAILWAY SIGNAL SEMAPHORE.
APPLICATION FILED NOV. 2, 1910.

991,537.

Patented May 9, 1911.
2 SHEETS—SHEET 1.

Fig. 1,

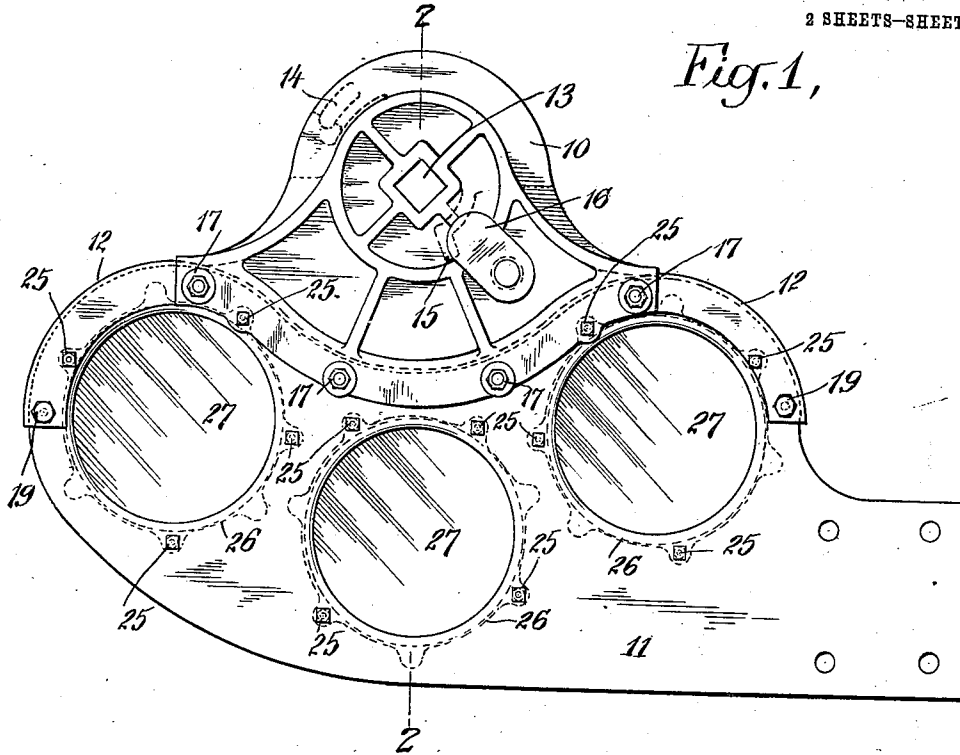


Fig. 2,

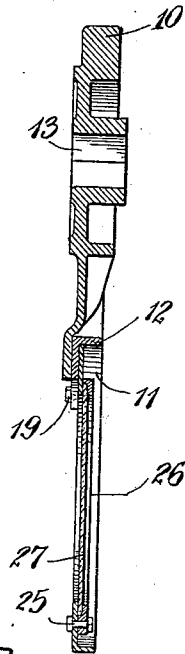
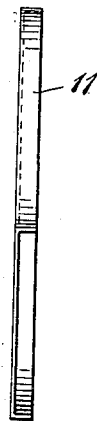


Fig. 4,



WITNESSES:

A. L. Venable
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INVENTOR

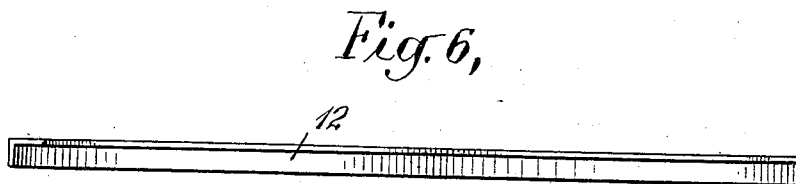
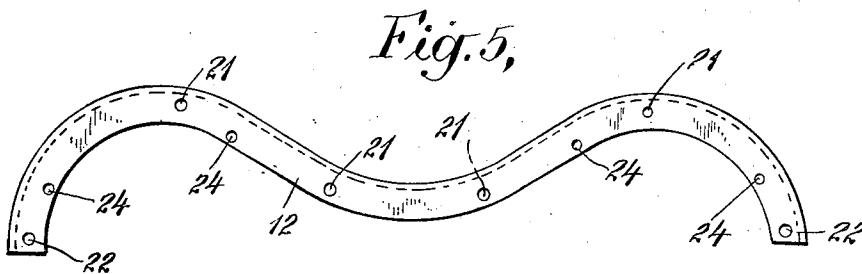
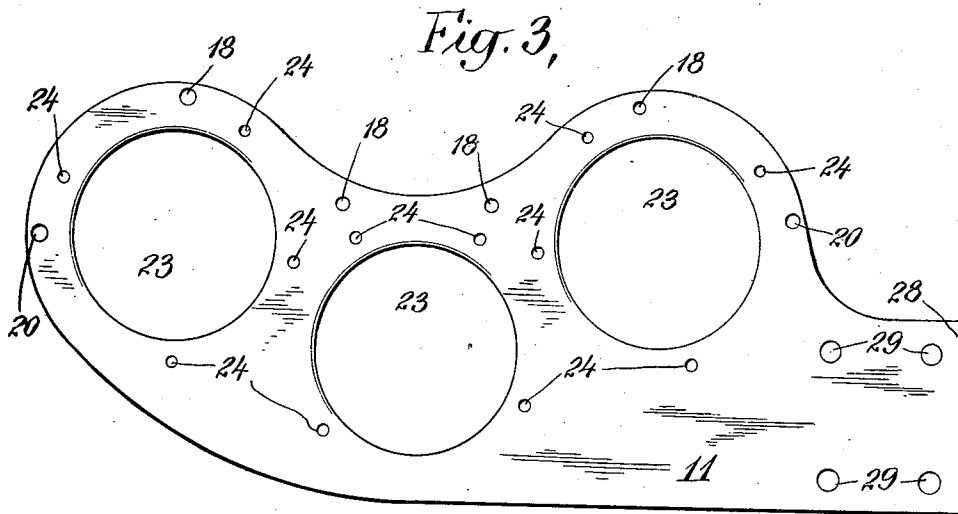
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2 SHEETS-SHEET 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE H. PFEIL, OF SWISSVALE, PENNSYLVANIA, ASSIGNOR TO THE UNION SWITCH & SIGNAL COMPANY, OF SWISSVALE, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

RAILWAY-SIGNAL SEMAPHORE.

991,537.

Specification of Letters Patent.

Patented May 9, 1911.

Application filed November 2, 1910. Serial No. 590,282.

To all whom it may concern:

Be it known that I, GEORGE H. PFEIL, a citizen of the United States, and a resident of the borough of Swissvale, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Signal Semaphores, of which the following is a specification.

My invention relates to semaphores for railway signals, and particularly to that type of semaphore which comprises a center or hub portion of strong, heavy material, and a roundel holder and blade support of lighter material such as sheet metal.

An object of my invention is to provide a means for strengthening the sheet metal roundel holder in the vicinity of the roundel holes without the necessity of forming extensions of small cross section on the center or hub portion to partially surround the sheet metal roundel holder. I accomplish this object by the use of an additional strengthening rib of angle iron secured to the center or hub portion and to the sheet metal roundel support, and having the proper shape to correspond with the contour of the sheet metal portion.

I will describe one form of semaphore embodying my invention, and then point out the novel features thereof in claims.

In the accompanying drawings, Figure 1 is a view showing in front elevation a railway signal semaphore embodying my invention. Fig. 2 is a sectional view on the line 2—2 of Fig. 1. Fig. 3 is a view showing in front elevation a roundel holder and blade support embodied in the semaphore shown in Figs. 1 and 2. Fig. 4 is an end elevation of the roundel holder and blade support shown in Fig. 3. Fig. 5 is a view showing in front elevation a strengthening rib of angle iron comprised in the semaphore shown in Figs. 1 and 2, and Fig. 6 is a top view of one end of the angle iron shown in Fig. 5.

Similar reference characters refer to similar parts throughout the several views.

Referring to Figs. 1 and 2, the numeral 10 designates a center or hub portion, formed preferably of cast iron. 11 is a roundel holder and blade support, preferably of sheet steel; and 12 is a rib of angle iron placed along the edge of the roundel holder 11 for the purpose of strengthening the latter.

The center portion 10 is provided with a square hole 13 for securing the semaphore to a shaft, in the usual manner. Two stops 14 and 15 are provided on this center portion 10 for limiting the angle of rotation of the semaphore by engagement with a lug or lugs on the supporting mast or post. 16 designates a boss provided with a hole into which may be fitted a suitable stud when the semaphore is to be operated directly by a connecting rod located on the outside of the supporting mast or pole; when the semaphore is operated by means connected directly with its shaft, as for example by a connecting rod located inside of the supporting mast or pole, this stud may be omitted.

The numerals 27 designate glass roundels of the usual type, placed in holes 23 in the roundel holder 11 (see Fig. 3) and held in place by rings 26 which latter are secured to the roundel holder by bolts 25 passing through holes 24 in the roundel holder 11. The end 28 of the roundel holder and blade support 11 is adapted to hold a semaphore blade in the usual manner, the latter being secured to the support 11 by means of bolts passing through holes 29.

Referring to Fig. 2, it will be seen that the strengthening rib 12 of angle iron is placed adjacent the lower edge of the cast center portion 10, and that the sheet metal roundel holder 11 is in turn placed adjacent the rib 12. The three are secured together by bolts 17 as shown in Fig. 1. These bolts 17 pass through holes 21 in the rib 12 (see Fig. 5) and through holes 18 in the roundel holder 11 (see Fig. 3). The extremities of the rib 12 are further secured to the roundel holder 11 by means of bolts 19 which pass through holes 22 in the rib 12 (see Fig. 5) and through holes 20 in the roundel holder 11 (see Fig. 3).

From the foregoing description of a semaphore embodying my invention, it will be evident that the sheet metal roundel holder 11 is strengthened in the portions adjacent to the roundel holes 23 by the angle iron rib 12. The use of this rib 12 permits of the center or hub portion 10 being formed of cast iron or other cast metal. If the additional rib 12 were omitted, and the center or hub portion extended around the sheet metal holder 11 far enough to strengthen the latter about the roundel holes 23, this center or hub portion could not be formed of cast

iron because of the difficulty of casting the extensions of light cross section. In a semaphore embodying my invention, these extensions of light cross section are replaced
5 by the angle iron 12.

Although I have shown herein only one form of semaphore embodying my invention, I do not wish to be limited to this particular form, as my invention may be applied
10 equally well to any semaphore employing a cast center or hub portion to which is secured a roundel holder and blade support of sheet metal.

Having thus described my invention, what
15 I claim is—

1. A railway signal semaphore comprising a roundel holder and blade support of sheet metal, a strengthening rib of angle iron extending along the edge thereof and conforming
20 in shape to the contour of the said edge, and a center or hub portion of cast metal secured to the roundel holder and to the strengthening rib.

2. A railway signal semaphore comprising
25 a center or hub portion of cast metal, a roundel and blade support of sheet metal secured thereto, and a strengthening rib of angle iron secured between the two and extending along and conforming to a portion
30 of the edge of the said sheet metal support.

3. A railway signal semaphore comprising a center or hub portion of cast metal, a roundel holder and blade support of sheet

metal secured thereto, and a section of angle
iron secured to the said parts and extending
35 in each direction from the cast metal portion along the edge of the sheet metal portion to strengthen the said sheet metal portion.

4. A railway signal semaphore comprising
40 a center or hub portion of cast metal, a roundel holder and blade support of sheet metal secured thereto and having holes adapted to receive glass roundels, and a section of angle iron secured to the said parts
45 and extending in each direction from the cast metal portion along the edge of the sheet metal portion to strengthen the said sheet metal portion adjacent the roundel
50 holes.

5. A railway signal semaphore comprising
a center or hub portion of cast metal, a roundel holder and blade support of sheet metal secured thereto, and a strengthening
55 rib of angle iron secured to both of the said parts and extending along the edge of the sheet metal portion in each direction from the cast metal portion.

In testimony whereof, I have signed my name to this specification, in the presence
60 of two subscribing witnesses.

GEORGE H. PFEIL.

Witnesses:

C. C. WHITE,
J. S. HOBSON.