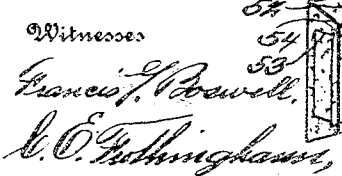


1,033,462.

2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

GAETANNO PETIGIO, OF WILMINGTON, DELAWARE.

SEMAPHORE-BLADE AND HOLDER THEREFOR.

1,033,462

Specification of Letters Patent. Patented July 23, 1912.

Application filed August 12, 1911. Serial No. 643,778.

To all whom it may concern:

Be it known that I, GAETANNO PETIGIO, a citizen of the United States, residing at Wilmington, in the county of Newcastle and State of Delaware, have invented a new and useful Semaphore-Blade and Holder Therefor; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a new and useful semaphore blade.

The principal object of the invention is to provide a novel form of holder for the semaphore blade, whereby the same may be easily and readily detached.

A further object of the invention is to provide a device of this nature, in which bolts and clamps are dispensed with, for holding the blade in the holder.

At present in practice, the blade is secured in the holder by bolts and nuts, which in time become considerably rusty, and it has been found that to detach the blade considerable trouble is experienced, in holding one's self at the upper portion of the staff of the signal apparatus, so as to file, or chisel the nuts from the bolts, whereby the blade may be detached.

In the present instance there has been produced a blade which may be slid in the holder easily and readily, and secured therein by a spring locking mechanism. In this manner an efficient and practical blade and holder therefor has been devised and one which comprises simplicity and utility.

A feature of the invention which is particularly essential is the fact that the holder and blade are to be constructed of any suitable material preferably pressed steel which is to be roughened or indented in any suitable manner over the entire surface, so that the paint will adhere thereto for a considerable length of time it having been found that, heretofore the paint wears off in a short while.

In the drawings there are disclosed several forms of the invention, but in practical fields these forms may necessitate alterations, to which the patentee is entitled, provided the alterations are comprehended within the scope of what is claimed.

The invention comprises further features and combination of parts as hereinafter set forth, shown in the drawings and claimed.

In the drawings:—Figure 1 is a view in perspective of the semaphore blade and holder therefor. Fig. 2 is a similar view looking at the opposite side of the blade and holder. Fig. 3 is a sectional view longitudinally of Fig. 1 on line 3—3 thereof. Fig. 4 is a sectional view transversely of Fig. 3 on line 4—4. Fig. 5 is a detail perspective view of the blade detached from the holder. Fig. 6 is a view in perspective of a modified form of blade and holder. Fig. 7 is a view in elevation of the blade and holder shown in Fig. 6, looking at the opposite side thereof. Fig. 8 is a sectional view longitudinally of Fig. 6 on line 8—8. Fig. 9 is a sectional view on line 9—9, transversely of Fig. 8. Fig. 10 is a view in perspective of the blade shown in Figs. 6, 7, 8, 9, and 10, showing the same detached from the holder. Fig. 11 is a perspective view of a modified form of blade and holder. Fig. 12 is a view in elevation of the former blade and holder shown in Fig. 11, looking at the opposite side. Fig. 13 is a sectional view on line 13—13 of Fig. 12. Fig. 14 is a sectional view transversely of Fig. 12 on line 14—14 thereof. Fig. 15 is a perspective view of the blade shown in Figs. 11, 12, 13 and 14 showing the same detached from the holder.

Referring more especially to the drawings 1 designates the holder and 2 the blade, shown in Figs. 1, 2, 3, 4, and 5. The holder 1 is constructed trough like, so as to provide the flanges 3. The blade 2 is provided on its longitudinal edges with T-flanges 4, and is received within the trough like holder, between the flanges 3, as shown in Figs. 1, 3, and 4, it being limited by the shoulder or stop 5, as shown in Fig. 3. By providing the blade 2 with the longitudinal T-flanges, less frictional contact between the blade 2 and the holder is necessary when sliding the blade in the holder, than if the blade was perfectly flat. Surrounding the holder is a pair of metal straps 6, which constitute means for holding the blade from falling outwardly of the holder. Riveted or otherwise secured to the straps 6, on one side of each of the straps are spring arms 7 and 8. The straps 6 constitute wear plates, as well as guides for the blade 2. These arms extend in opposite directions, as shown. The free end of the arm 7 is provided with a finger or hand piece 9, whereby the arm may be sprung outwardly. Also carried by the free end of the arm 7 are the studs 10,

the restricted threaded portions 11 of which penetrate the arm, and have threaded thereon nuts 12, for securing the studs 10 securely to the arm. These studs 10 engage depressions or indentures 13 of the blade 2, so as to assist in holding the blade in the holder. The free end of the arm 8 is provided with studs 14, which are supplied with restricted threaded portions 15. The threaded portions 15 penetrate the arm 8 and have threaded thereto thumb nuts 16. These nuts 16 constitute means whereby the free end of the arm 8 may be sprung outwardly, so as to withdraw the studs 14 from the depressions or indentures 17, whereby the blade 2 may be detached from the holder. The studs 10 and 14 penetrate the straps 6, as shown. The studs 14 assist the studs 10 in holding the blade 2 in place. The depressions 17 are on the opposite side of the blade 2 as illustrated.

In Fig. 6 the holder 1 is provided with a trough like pocket 18, which is similar to the holder 1 in Fig. 1, with the exception that the flanges 3 thereof are provided with overhanging supplemental flanges 19, which take the place of the metal straps 6. The inner surface of the pocket 18 of the form of holder shown in Figs. 6, 7, 8, and 9 is provided with an elongated recess 20. Secured in the recess 20 by screws or other suitable means 21 is a leaf spring arm 22, the free extremity of which terminates into a right angled portion 23, designed to engage a transverse recess 24 of the blade 25, so as to assist in holding the blade 25 in place. The recess 20 becomes considerably deeper at the outer end of the holder, as shown at 26, so as to receive the leaf spring arm 22, that is, when the right angled portion 23 is withdrawn from the recess 24.

Bolted or otherwise secured as shown at 27, to the holder is an additional leaf spring arm 28, which is provided with laterally extending portions 29, to which the studs 30 are bolted by the nuts 31. These studs enter the depressions 32 of the blade 25, for holding the blade in position in the holder. Carried by the leaf spring arm 28 is a finger or hand piece 33, for manipulating the arm, so as to withdraw the studs 30 from the depressions 32. The free portion 34 of the arm 28 terminates in to an angle end 35, which is riveted, bolted or otherwise secured at 36 to the leaf spring arm 22. It will be observed that, as the arm 28 is sprung outwardly of the holder, the spring arm 22 is also moved sufficiently to enter the recess 20, until the right angle portion 23 is free of the recess 24, whereby the blade 25 may be withdrawn from its holder.

The blade 25 may or may not be provided with a strengthening plate 37. This plate 37 is ribbed as shown at 38, and if used, the same is secured to the blade 25 by the screws

39, shown in Fig. 7. In Fig. 8 the blade 25 is shown as being plain with the exception of the plate 37. In Fig. 10 however, the blade 25 is provided with a wear plate 40 which is secured thereto by the screws 41. If this wear plate is utilized, the right angled portion 23 and studs 30 penetrate the same as at 42 and 43.

In Figs. 11 to 14 inclusive, the holder 1 is similar to that shown in Figs. 1 to 4 inclusive, with the exception that one half of the flanges 3 on their inner surfaces are inclined or beveled in two directions, as shown at 44 and 45, so as to receive the body 46 of the blade 47 in a dovetail manner, shown in Figs. 12 and 14. The holder in Figs. 12 to 15 inclusive is provided with a spring arm 48, similar to those previously set forth, the same being bolted as at 49 to the holder, and provided at its free ends with a stud 50, which is secured thereto by the thumb nut 51, which constitutes means for throwing the spring 48 outwardly of the holder. The stud 5 instead of penetrating the blade 47 as shown in Figs. 12 to 14 inclusive, assumes a position in the rear of the body 46 of the blade 47, so as to hold the blade dove-tailed in the holder. The body 46 of the blade comprises a trough like member 52, in which the blade 47 proper is received in a dove-tailed way as shown at 53. A cover plate 55 is dove-tailed, as shown at 54 in the trough like member 52, and is secured to the blade proper 47 by the screws 56. Screws or other suitable means 57 also penetrate the trough like member 52 from the side opposite the cover plate 55. This trough like member 52 and the cover plate 55 constitute protecting means for the blade 47, so that when it is necessary to renew the blade 47, the same trough like member 52 may be used.

From the foregoing it will be noted that there have been devised, novel, simple, efficient and practical semaphore blade and holder, and one which will obviate the use of bolts and clamps.

The invention having been set forth, what is claimed as new and useful is:—

1. In combination, a semaphore blade, a trough like holder therefor, spring means, one secured on either side of the holder, the spring means having studs, and means for securing the studs to the first means, the blade having depressions on either side to receive the studs.

2. In combination, a semaphore blade having depressions upon its opposite faces, a trough like holder having a single open side to receive the blade, spring arms, one secured to each side of the holder, and means carried at the free end of the arms, penetrable in the depressions of the blade.

3. In combination, a semaphore blade; a trough like holder therefor, the blade and

the holder being telescopically united together, a spring arm secured at one end of the holder and provided at its free end with means penetrable through the holder, to engage the blade, so as to hold the blade in a telescopically united manner in the holder.

4. In combination, a semaphore blade, a holder therefor having a guide to receive the blade, the guide constituting means to prevent lateral movement of the blade, and spring clamping members manually operable to permit the blade to be detachable.

5. A signal blade comprising a blade and a holder, the blade and holder being constructed to be telescopically united, and yieldable clamping means manually operable to permit the separation of the parts.

6. A signal blade comprising a blade and a holder constructed to be telescopically united, wear plates for said parts, and yieldable clamping means manually operable to permit the separation of said parts.

7. A signal blade comprising a blade and a holder, the blade and the holder being con-

structed to be telescopically united, and a yieldable spring clamping arm manually operable to permit the separation of said holder and blade.

8. A signal blade comprising a blade and a holder, the holder having guides adapted to telescopically receive the blade, and yieldable clamping means manually operable to permit the separation of said holder and blade.

9. A signal blade comprising a blade and a holder, the holder having guides adapted to receive the blade telescopically therein, wear plates for said parts, and yieldable clamping means manually operable to permit the separation of said parts.

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

GAETANNO PETIGIO.

Witnesses:

DEAN SWIFT,
ROBERT A. BOSWELL.