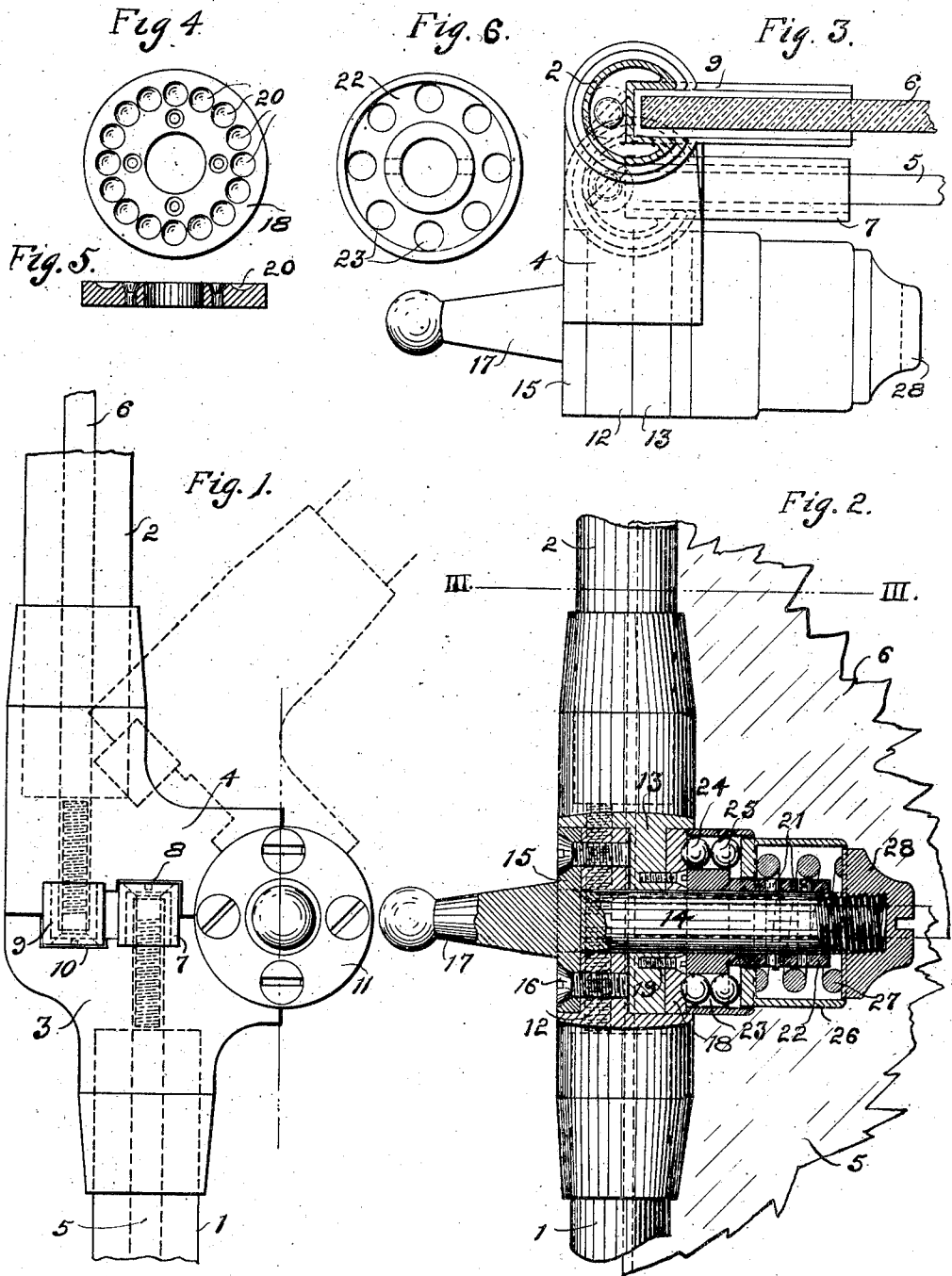


A. L. BANKER.
WIND SHIELD.
APPLICATION FILED JULY 15, 1910.

1,005,136.

Patented Oct. 10, 1911.



WITNESSES

John H. Hendley.
James C. Bradley

INVENTOR

A. L. Banker
by atty
Paul Symistredo

UNITED STATES PATENT OFFICE.

ARTHUR L. BANKER, OF PITTSBURGH, PENNSYLVANIA.

WIND-SHIELD.

1,005,136.

Specification of Letters Patent.

Patented Oct. 10, 1911.

Application filed July 15, 1910. Serial No. 572,204.

To all whom it may concern:

Be it known that I, ARTHUR L. BANKER, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful improvements in Wind-Shields, of which the following is a specification.

The invention relates to wind shields of the type having an upper portion hinged to a lower portion, and has for its primary objects the provision of an improved form of adjustable hinge connection between the sections of the shield; and the provision of an improved arrangement at the joint between the upper and lower sections of the shield whereby the whistling at this point is eliminated and the passage of rain between the edges of the glasses avoided without bringing such edges into contact. One embodiment of the invention is illustrated in the accompanying drawings wherein,

Figure 1 is a side view of the shield at the hinge,

Figure 2 is a rear view of the structure as shown in Fig. 1 with the hinge in section,

Figure 3 is a section on the line III—III of Fig. 2,

Figures 4 and 5 are face and sectional views respectively of the bearing plate, and

Figure 6 is a face view of what may be termed the ball carrier.

Only a fragmentary portion of the shield at the joint between the upper and lower shield sections is shown in Figs. 1, 2 and 3, but it will be understood that the body portions of the sections may be of any approved form, and that the hinge arrangement at the other side of the shield is precisely the same as that shown in Figs. 1, 2 and 3. As shown in these Figs., 1 is the lower frame member, preferably of brass tubing formed to receive the glass as indicated in the cross section in Fig. 3; 2 is the upper frame member which is of brass tubing of the same cross section as the member 1; 3 is a bearing block brazed or otherwise secured to the upper end of the member 1; 4 is a similar bearing block secured to the lower end of the member 2; 5 is the glass carried by the lower section of the shield; 6 is the glass carried by the upper section of the shield; 7 is a clip for engaging the corner of the glass 5, which clip is secured in the block 3, and engages a recess 8 in the face of the block 4; 9 is a corresponding clip secured to the upper block 4 and fit-

ting a recess 10 in the face of the block 3; and 11 is the ratchet hinge by means of which the bearing blocks 3 and 4 are pivotally secured together to the rear of the glasses 5 and 6.

As indicated in Figs. 1 and 3 the lower edge of the glass 6 overlaps the upper edge of the glass 5, such edges being carried respectively by the clips 7 and 8 secured to the blocks 7 and 9. This overlapping of the edges of the glasses constituting the two halves of the shield is advantageous in that it prevents the passage of rain between the edges of the glass, without the necessity of making such edges engage and without the use of packing material. The arrangement also eliminates the whistling which occurs at the joint between the glasses in the ordinary type of wind shield when the machine is going at a high rate of speed. The recessing of the faces of the bearing blocks 3 and 4 at 8 and 10 to receive the clips 7 and 9 is also advantageous in that the clips and the edges of the glasses are securely held in position and the blocks 3 and 4 are locked against movement relative to each other.

The means for hinging the upper and lower sections of the shield together constitute an important feature of my invention, and is clearly shown in Fig. 2. As here shown the block 3 has projecting from it and integral with it a disk 12, and the block 4 has projecting from it and integral therewith an opposing disk 13. The disk 12 carried by the block 3 is apertured to receive the pin 14, and this pin 14 is provided at its left hand end with a disk 15 rigidly secured to the disk 12 by means of the screws 16 and with a projecting stud 17 whose outer end is ball shaped and is engaged by one of the rods (not shown) for holding the lower section of the shield in upright position. The disk 13 integral with the upper block 4 carries a bearing plate 18 secured by means of the screws 19, which bearing plate is, as indicated in Fig. 4, provided in its base with a plurality of ball recesses 20. Secured rigidly to the pin 14 by means of the cross pins 21 is the ball carrier 22 which ball carrier is provided with a plurality of recesses 23 in which are mounted the sets of balls 24 and 25, the balls 24 being seated in the recesses 23 of the bearing plate 18, and the balls 25 bearing against the balls 24 and held in position by means of the thimble 26. The thimble 26 is held yieldingly to the left by

means of a spring 27 whose tension may be adjusted by means of the nut 28 screw threaded to the end of the pin 14. From the foregoing it will be seen that the disk 13 and its bearing plate 18 turn with the block 4 carried by the upper shield section, while the disk 12, the disk 15, the pin 14, and the ball carrier 22 with its balls 24 and 25 are held nonrotatively with respect to the block 3, so that when the upper shield member is swung rearwardly the plate 18 rotates past the balls 24 and 25, which balls are cammed to the rear against the resistance of the spring 27 as the shield assumes a new position. The use of the two sets of balls instead of a single set permits the use of a longer bearing for the balls in the carrier 22, and the set 25 serves as an anti-friction support for the set 24.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent is the following:—

1. In combination in a wind shield, a lower frame member, a bearing block at each side thereof having a recessed face and a glass clip to the rear of the recess and projecting above the face of the block, a glass carried by the clips, an upper frame member, a bearing block at each side thereof hinged to the opposing bearing block on the lower frame member and having a re-

cessed face and a glass clip to the front of the recess and projecting below the face of the block, a glass carried by the clips, and means for holding the shield in upright position, the relative position of the clips and recesses being such that when the upper frame member is in upright position the clips on the lower frame member engage the recesses upon the bearing blocks of the upper frame member and the clips on the upper frame member engage the recesses upon the bearing blocks of the lower frame member.

2. In combination in a hinge for wind shields, a hinge member having a bearing member provided in its face with a series of ball recesses, a second hinge member, a ball carrier mounted to turn with such second hinge member and provided with a series of perforations carrying balls engaging said recesses, another set of balls also lying in the perforations and engaging the other balls, and spring means non-rotatable with respect to the ball carrier for yieldingly pressing the last mentioned set of balls against the other balls.

In testimony whereof I have hereunto signed my name in the presence of the two subscribed witnesses:

ARTHUR L. BANKER.

Witnesses:

I. M. BLAINE,
J. C. BRADLEY.