

F. A. DILLINGHAM.
WIND SHIELD FOR VEHICLES.
APPLICATION FILED FEB. 13, 1907.

914,557.

Patented Mar. 9, 1909.
3 SHEETS—SHEET 1.

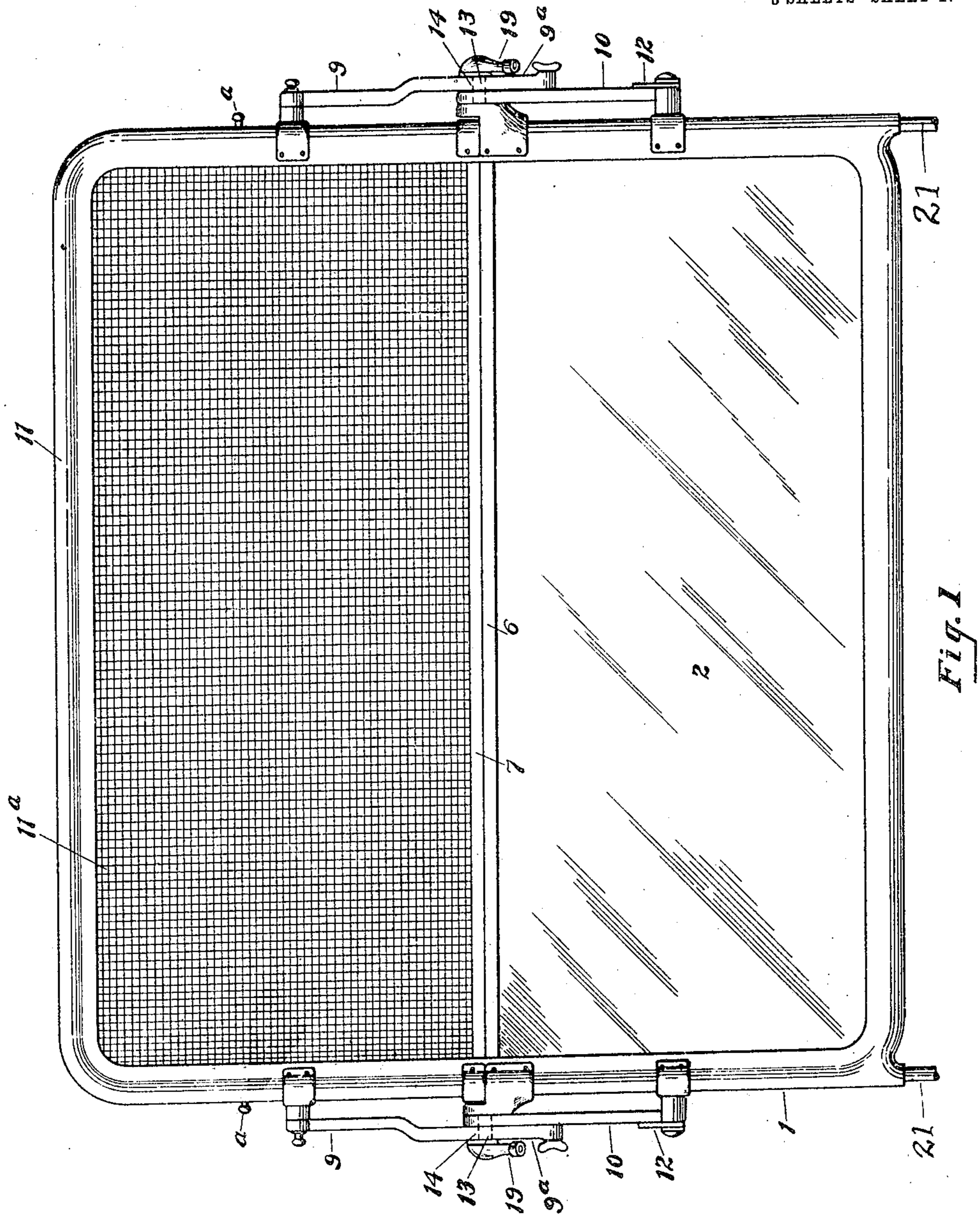


Fig. 1

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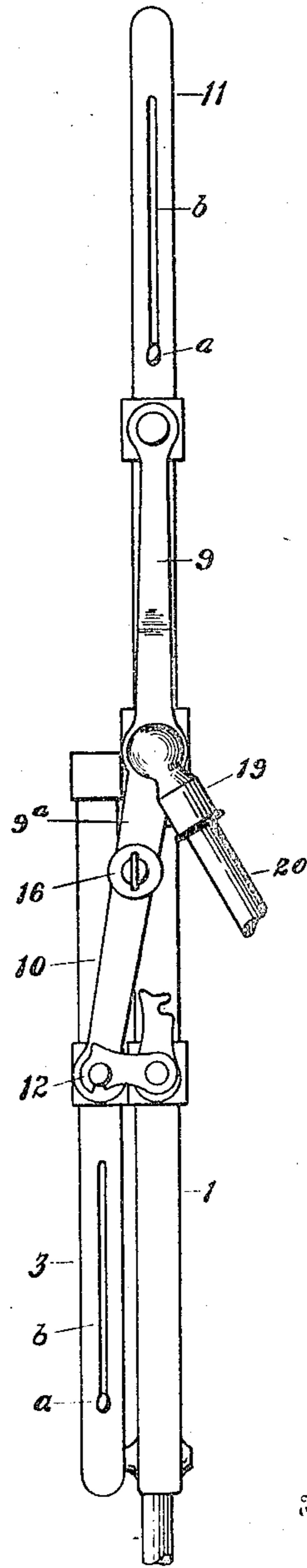
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3 SHEETS—SHEET 2.

Fig. 2



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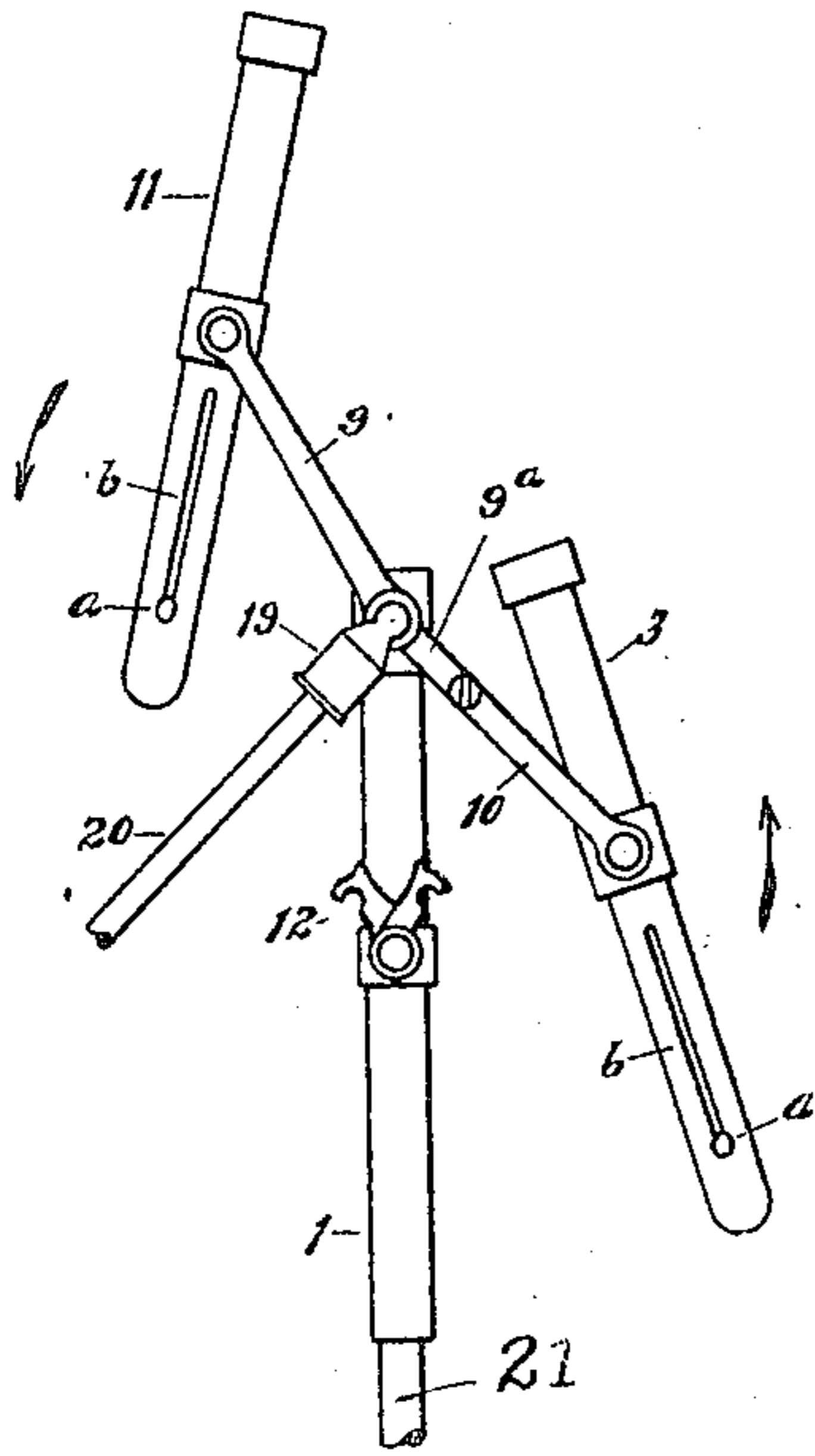


Fig. 8.

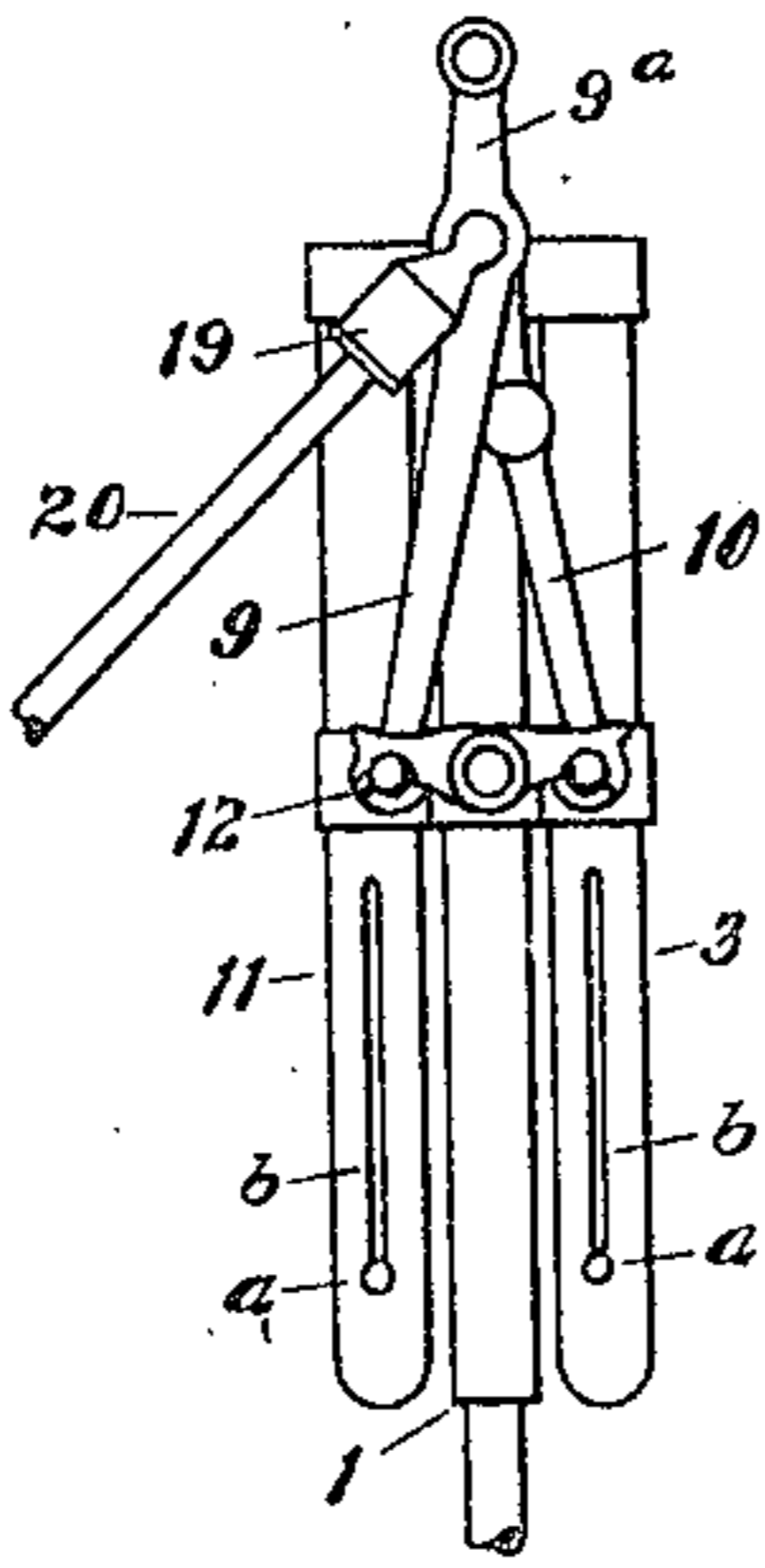


Fig. 7.

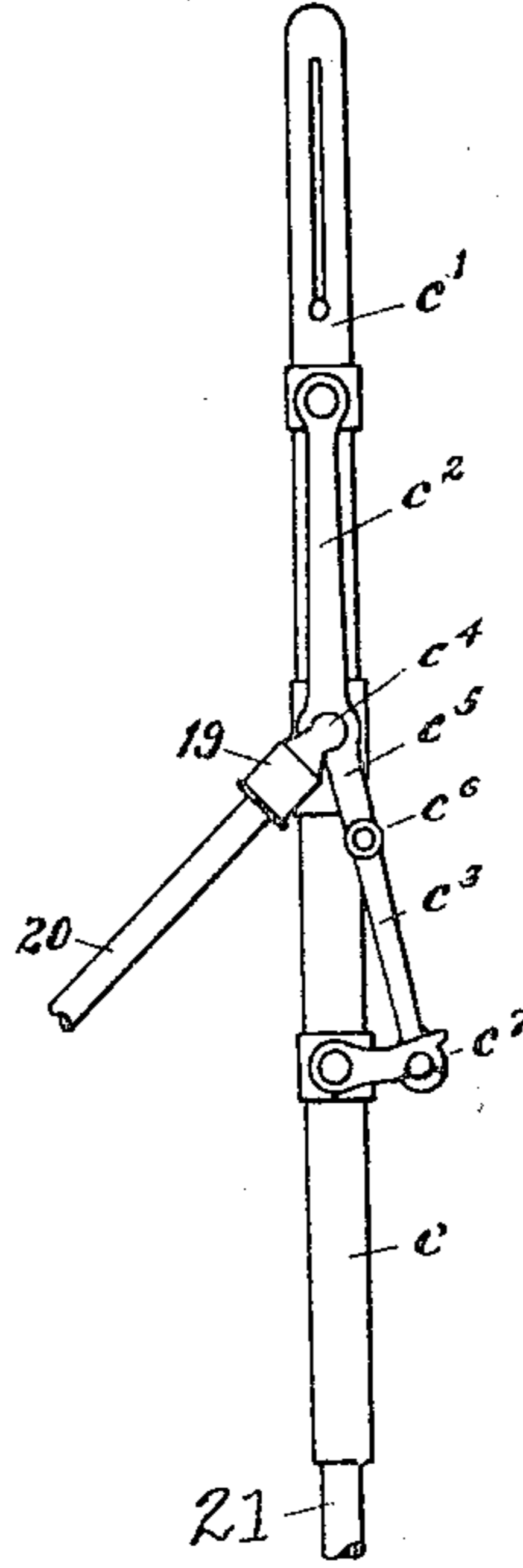


Fig. 10.

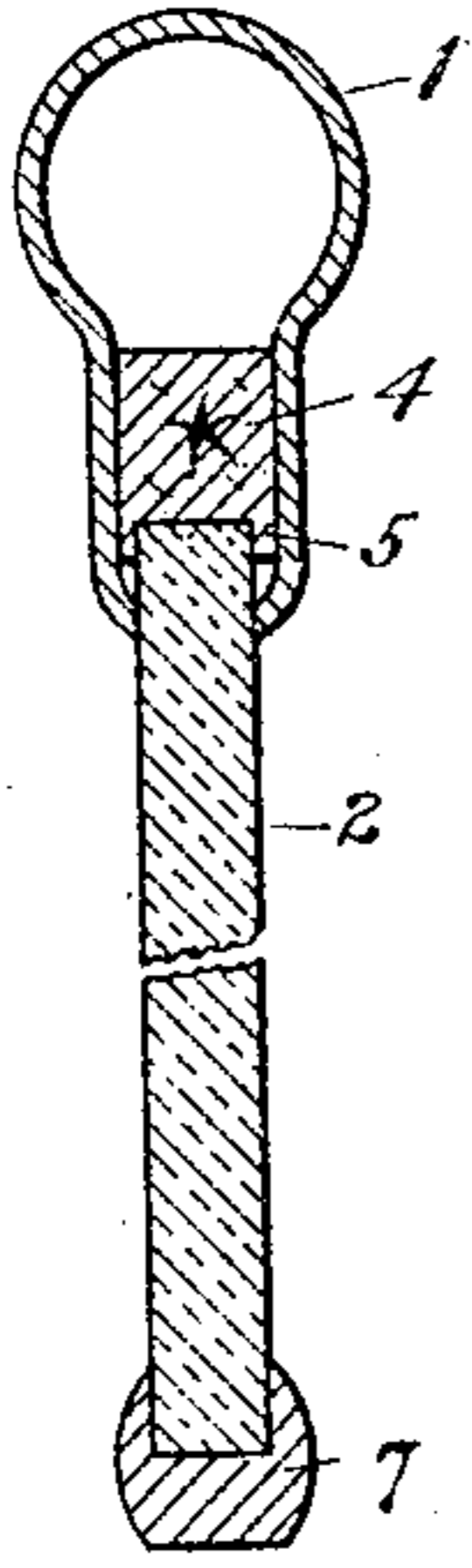


Fig. 3.

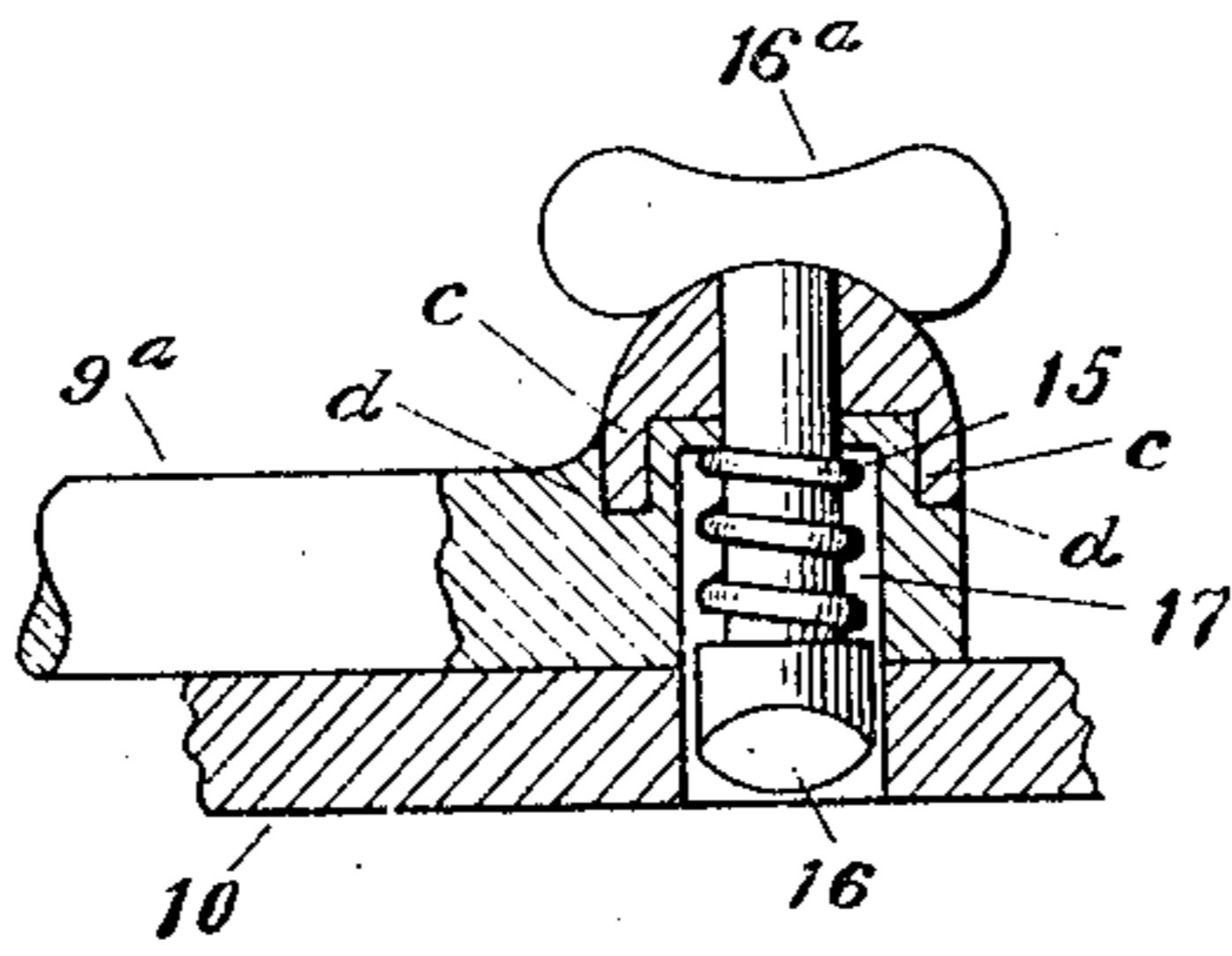


Fig. 5.

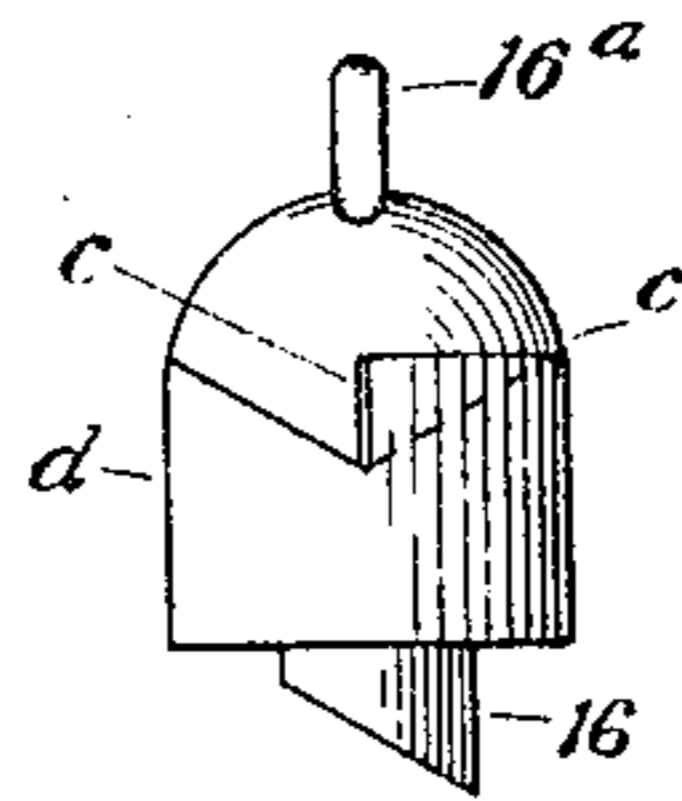


Fig. 6.

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UNITED STATES PATENT OFFICE.

FREDERICK A. DILLINGHAM, OF NORWALK, OHIO, ASSIGNOR TO THE TROY CARRIAGE SUN SHADE COMPANY, OF TROY, OHIO, A CORPORATION OF OHIO.

WIND-SHIELD FOR VEHICLES.

No. 914,557.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed February 13, 1907. Serial No. 357,206.

To all whom it may concern:

Be it known that I, FREDERICK A. DILLINGHAM, a citizen of the United States, residing at Norwalk, in the county of Huron and State of Ohio, have invented certain new and useful Improvements in Wind-Shields for Vehicles, of which the following is a specification.

My invention relates to improvements in shields for vehicles, especially designed for automobiles. Its objects are, among other things, to guard or shield the vehicle-occupants from certain annoyances attending the use particularly of speedy or rapidly moving vehicles, such as above named, and yet not obstruct the range of vision, and also to protect the occupants from the weather, while the unobstructed passage of the air may be admitted to the occupants when desired as during certain weather-temperatures.

Said invention consists of certain features or instrumentalities substantially as hereinafter fully disclosed and specifically pointed out by the claims.

In the accompanying drawings illustrating the preferred embodiment of my invention.—Figure 1 is a front elevation thereof. Fig. 2 is an end elevation of the same. Fig. 3 is a vertical transverse section produced through one of the movable sections. Fig. 4 is a broken sectional elevation taken centrally through a lateral piece of the stationary frame and one of the folding frames disclosing more especially the locking or retaining bolt for the sections. Figs. 5 and 6 are enlarged detailed views of the retained catch for the arms. Fig. 7 is an end elevation showing the lowered or folded positions of the upper glass-section and the screen-section, both being folded. Fig. 8 is also a side view showing the screen-section as being moved to its lowered position and the foldable glass-section as being moved into its upper position as indicated by the arrows. Fig. 9 is an end elevation showing the folded position of the screen-section. Fig. 10 is a view of the device in end elevation, devoid of the screen-section.

Like parts are represented by similar characters of reference in the several views.

In carrying out my invention, I employ a suitable sectional frame, composed of three

sections 1, 3, and 11, with the stationary section or member, 1, adapted to be substantially attached to the vehicle dash or analogous portion of the vehicle or automobile. The respective frame sections are preferably of drawn tubular metal or brass, having a certain amount of spring or resiliency, and are suitably fitted or equipped, the stationary one, 1, with glass, 2, one of the movable sections, for instance the one 11, with a fine wire screen 11^a, and the other movable section, 3, being also fitted with glass similar to the stationary section. The glass and the screen are secured in wooden pieces, 4, mortised as at 5, to receive the same and these wooden pieces 4 are inserted between the elongated or drawn out extensions of the tubular frame pieces as shown in Fig. 3. This construction provides for isolating particularly the glass plate from contact with the metallic surface of said frame sections for the major portion of its surface, and yet said elongated portions of the frame sections are adapted by their resiliency to effectively clamp said wooden pieces in place together with said glass plates and screens. By thus securing said parts in place, especially as relates to the glass plates, the liability of the latter becoming broken is greatly lessened, if not entirely overcome, and the plates and screen prevented from rattling or vibrating in the frame sections. The parting strips 6 and 7, which are adapted to receive the edges of said glass plates and the edge of the screen-receiving wooden pieces, respectively, are preferably formed of brass and also have a limited amount of resiliency or spring to provide for springing or clamping the same upon the edge of each of the glass plates and the wooden receiving pieces for the edge of the screen. It will be understood that the screen has a wooden receiving piece or frame in which the screen proper is clamped and this wooden receiving piece is the part that would be slipped into and clamped by the parting strip 7. In Fig. 1 it will be understood that the parting strip 6 is the one of the stationary frame, 1, and that the movable glass frame section 3 will also be provided with a similar parting strip.

Each of the foldable frame sections is adapted to be sustained in upright position

with relation to the bottom stationary frame section by means of the relatively long bolt, A, suitably arranged and guided within the tubular portion thereof and adapted to be moved down into said stationary frame section past the meeting point between the two frame sections, as clearly disclosed by Fig. 4; said bolt, A, has a headed lateral stud, *a*, preferably secured thereto and projecting out through a vertical slot, *b*, in the movable frame section for convenient grasping and operation.

The respective movable frame sections are actuated by levers one on each side thereof, formed of two separate arms 9 and 10; the arms 9 having their outer ends pivotally connected to the frame section 11, which carries the wire screen, and the lower arms or members 10 being similarly pivoted to the movable section 3 which carries the glass plate. The arms and members, 9 and 10, of each lever are fulcrumed upon the common stud, 13, projecting from each side edge of the stationary frame section, 1, at its upper edge, the fulcrumed portions of said lever members being perforated, as at 14, and slipped upon said pivots or studs 13. Located on each side of the stationary frame are catches 12 which, when the respective movable frames are in folded position will engage over suitable projections on said movable members to hold the same in place. The members or arms, 9 and 10, of each lever are adapted to be capable of being readily connected together or disconnected to permit said movable frame sections to be either moved together or independent of each other. When the arms or members 9 and 10 are connected together, upon the swinging of one of said frame sections to unfolded position, the other will be returned to its folded position and vice versa; when the arms or members 9 and 10 are disconnected, either one of said movable frame sections may be swung to its unfolded position or to its folded position independently of the other. Each of the arms or members 9 is provided with an extension 9^a which projects in a slightly angular direction therefrom and is adapted to lie alongside the other arm 10. Each of the extensions 9^a is provided with an aperture or bore 17 within which is inserted a locking bolt or catch 16, normally spring pressed by a spring 15 so that its end projects laterally from the side of said extension 9^a into an aperture or recess in the arm 10. The locking bolt or catch 16 is provided at its opposite end with a thumb piece 16^a and with a cam, *c*, which in its normal position rests in the low part of a cam-track, *d*, formed upon the extension 9^a about the aperture therein. By giving the thumb piece 16^a a turn in one direction, it will be seen that the locking bolt or catch 16 will be withdrawn

from engagement with the arm 10, and the respective arms 9 and 10 thus disconnected from each other at any time when it is desired to operate the movable frame sections independently of each other. The respective arms 9 and 10 may be again connected in a manner which will be well understood. In the drawings I have illustrated two cams and cam-track arranged diametrically opposite each other as the preferable construction. Also secured upon each of the studs 13 is a socket 19, into which is secured the upper end of each of the two brace rods 20 which are suitably fastened at their lower ends to the vehicle frame for firmly staying the stationary frame in position. These sockets 19 also serve to hold the arms 9 and 10 in position on the studs. The stationary frame is further secured to the vehicle body by upwardly projecting pins or rods 21 which extend into the tubular frame as shown in Fig. 4, and are connected at their lower ends to the vehicle body.

It will be noted that by suitably manipulating the parts as will be appreciated by reference particularly to Fig. 8, the screen-section 11 may be readily lifted into elevated position in the upper frame-section whenever desired, as for instance in shielding the vehicle or automobile occupants from gnats or insects etc., and yet retain the benefits of the fanning effects arising from the swift motion of the vehicle as desirable during high temperatures. Or, if desired, the lower foldable glass-plate section may in like manner, be elevated into position as in inclement weather, simultaneously with the lowering of said screen-section, the latter being folded down alongside of the permanent glass-section or front as will be readily noted. Or, if required, the screen and movable glass-section may both be folded into lowered position, the same passing down upon opposite sides of the permanent glass front as clearly disclosed by Fig. 7. Thus, it will be observed that a "front" of the aforesaid type is provided, which affords the requisite protection from the inclemency of the weather, and which may be conveniently dispensed with when required, and also the character thereof be changed as may be desired in promoting the comfort of the vehicle or automobile occupants as pointed out.

In Fig. 10 is illustrated a modification by which one of the movable sections, for instance, the screen carrying one, is dispensed with. In this view, *c* represents the stationary section and *c*¹ one of the movable sections. The respective arms of the connecting levers are represented by *c*² and *c*³, both of which are fulcrumed at *c*⁴. The arm *c*² is provided with an extension *c*⁵ which is detachably connected to the arm *c*³ at *c*⁶ in the manner shown in Fig. 5 as pre-

viously described. The outer end of the arm c^3 , in this modified construction will be connected or latched, as at c^7 to the stationary frame c , this connection being made in any suitable manner.

Having thus described my invention, I claim:

1. A device of the character described, having two foldable sections, said sections being so connected one with the other and to the main part or front so that in the folding or moving into position of the said foldable sections the movement of one is adapted to counterbalance the movement of the other.

2. A device of the character described, having a fixed part and two movable parts, one of said movable parts being in the nature of a screen and the other of transparent material, and means for adjusting either in position for use, said means including a connection between the parts of such a character that the parts are simultaneously adjusted one into and one out of position so that the one is adapted to counterbalance the other, substantially as specified.

3. In a device of the character described comprising a stationary part and two foldable parts, one of glass-plate and the other of screen-type, said stationary and foldable parts having hollow supporting frames adapted to be brought into adjusted position, and means extending through said hollow parts for locking said sections together in position for use.

4. A device of the character described comprising a stationary section and two foldable sections, and means for connecting said two foldable sections together and to the said stationary section so that the adjusting of one into position and the folding of the other out of use is accomplished simultaneously.

5. A device of the character described consisting of a stationary part and two foldable parts, fulcrumed arms or levers pivoted to said stationary part and to the movable parts respectively, and a detachable connection between the arms extending to said foldable parts, substantially as specified.

6. In a device of the character described, a stationary frame section and a foldable section, each of said frame sections being formed of tubular metal, said metal being opened at one side and provided with resilient extended edges, a plate or glass shield located between said resilient extended edges, said plate or shield terminating substantially at the point where said extended edges begin so as to leave the main tubular portions open, and a locking bolt located in the tubular portion of one of said sections adapted to enter the tubular

portion of the other of said sections, substantially as and for the purpose specified.

7. A device of the character described, having two foldable sections, a lever comprising two separate members or arms, one pivotally connected to one section and the other arm pivoted to the other section, and means for the holding of said arms relatively fixed.

8. A device of the character described, having two foldable sections and a two-part lever fulcrumed in position in the plane of the movement of said sections and having its ends pivotally connected to said sections at its ends respectively, and a clutch-retained spring catch for holding the parts of said lever relatively fixed.

9. In a device of the character described, a stationary U-shaped tubular frame, and a foldable U-shaped tubular frame, the inner sides of each of said tubular frames being formed open and provided with resilient extended edges, a plate or shield located between said extended edges, said plate or shield terminating substantially at the point where said extended edges begin, a parting strip also on the edge of each of said glass shields, and connecting the ends of each of said U-shaped frames, and a locking bolt located in one of said tubular frames and adapted to engage in the other of said tubular frames, substantially as specified.

10. In a device of the character described, a stationary frame and a foldable frame, each of said frames being formed of tubular metal with lateral resilient elongations, a shield or plate located between said elongations of each frame, an auxiliary strip within said elongations to form a packing or joint for said shield or plate in said elongations, said plate or shield and said packing or joint terminating at the point where said elongations begin so as to leave the main tubular portion of the said frame free, and a locking bolt in the free tubular portion of one of said frames adapted to enter the free tubular portion of the other of said frames, substantially as specified.

11. In a device as described, the combination of a stationary section having a tubular side portion, a foldable section also having a tubular side section, each of said tubular side sections have elongations for the reception of the plate or shield between the same, said plate or shield terminating at the point where said lateral elongations begin so as to leave the main tubular portion of each side section free, and a sliding bolt or catch in one of said hollow side sections adapted to enter the other of said hollow side sections to lock said sections together, substantially as specified.

12. The combination with a stationary section of two foldable sections joined to-

gether by pivoted arms, as described, a connection between the arms of the said sections whereby the same may be folded simultaneously so as to counterbalance each other, or separately, as and for the purpose specified.

13. The combination with a stationary section, of foldable sections hinged thereto by pivoted arms, as specified, and a spring catch having a clutch adapted to form a re-

leasable connection between the respective 10 arms of said sections, substantially as and for the purpose specified.

In witness whereof I affix my signature, in presence of two witnesses.

FREDERICK A. DILLINGHAM.

Witnesses:

H. T. McKEEVER,
BENNETT S. JONES.