

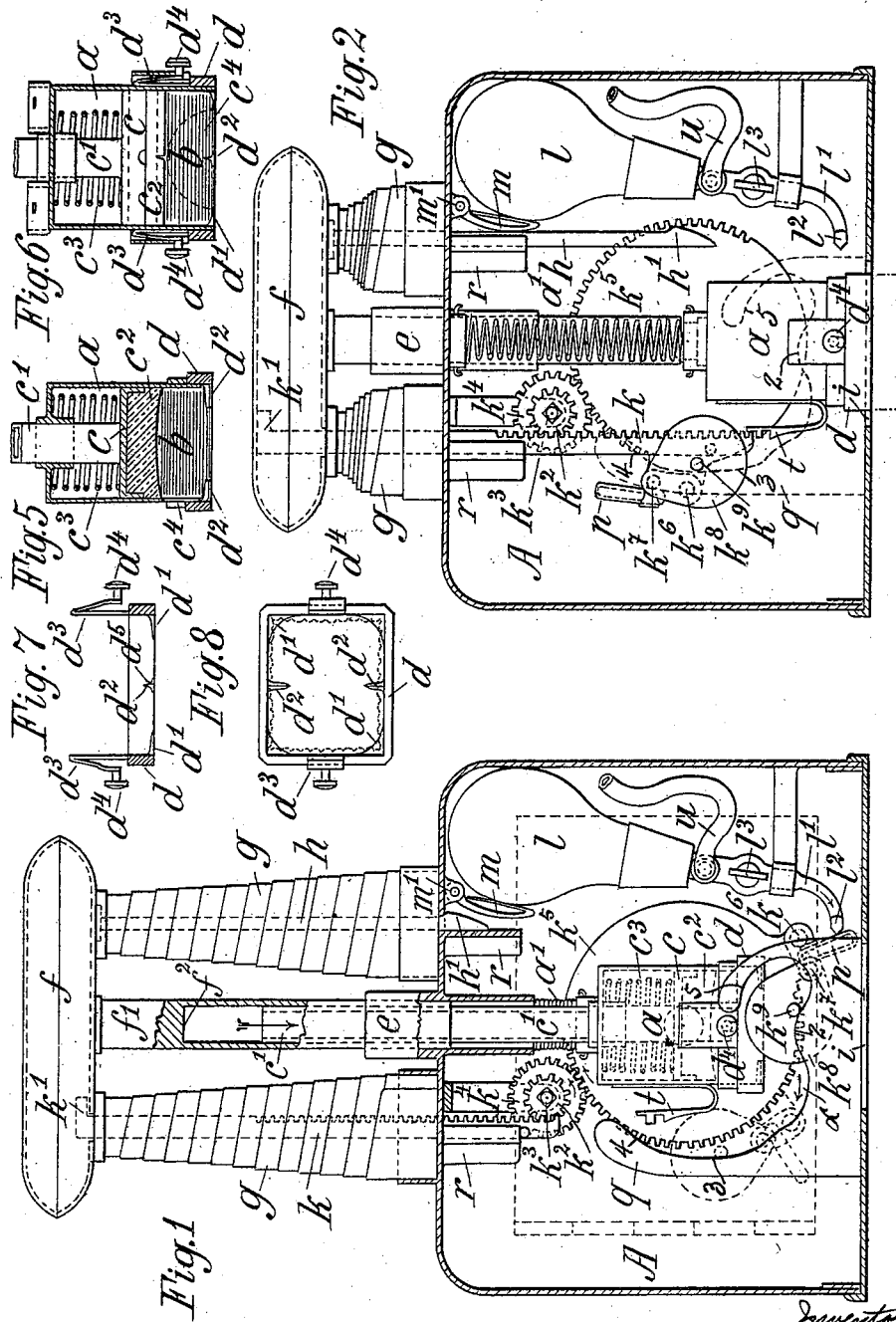
A. FRENTZEL.

APPARATUS FOR AFFIXING POSTAGE STAMPS OR OTHER GUMMED OR ADHESIVE PAPERS.

(Application filed Dec. 31, 1897.)

(No Model.)

2 Sheets—Sheet 1.



Witness
 J. H. H.
 W. Sommer

Inventor,
 Alving Frentzel,
 by *[Signature]*

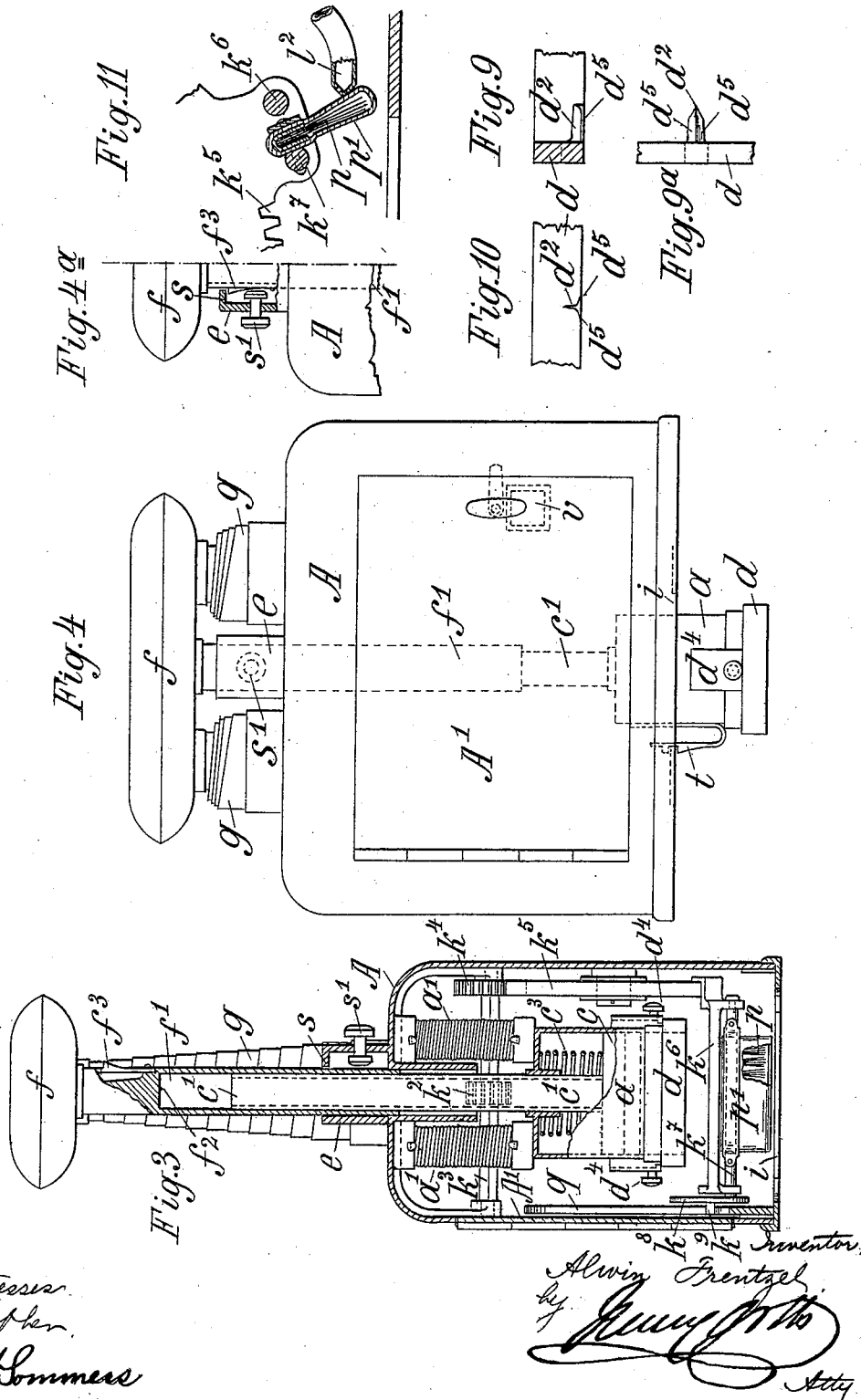
A. FRENTZEL.

APPARATUS FOR AFFIXING POSTAGE STAMPS OR OTHER GUMMED OR ADHESIVE PAPERS.

(No Model.)

(Application filed Dec. 31, 1897.)

2 Sheets—Sheet 2.



Witnesses:
B. S. P. H.
P. H. H.

Alwin Frentzel
Inventor
by *Henry M. H.*
Att'y

UNITED STATES PATENT OFFICE.

ALWIN FRENTZEL, OF VIENNA, AUSTRIA-HUNGARY.

APPARATUS FOR AFFIXING POSTAGE-STAMPS OR OTHER GUMMED OR ADHESIVE PAPERS.

SPECIFICATION forming part of Letters Patent No. 648,941, dated May 8, 1900.

Application filed December 31, 1897. Serial No. 664,969. (No model.)

To all whom it may concern:

Be it known that I, ALWIN FRENTZEL, a subject of the Emperor of Germany, residing at Vienna, in the Province of Lower Austria, in the Empire of Austria-Hungary, have invented certain new and useful Improvements in Apparatus for Affixing Postage-Stamps or other Gummed or Adhesive Papers, (for which Letters Patent have been obtained in Austria, dated May 20, 1897, registered Vol. 47, Fol. 1,795, and in France, dated April 24, 1897, No. 266,316;) 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, reference being had to the accompanying drawings, and to letters and numerals of reference marked thereon, which form a part of this specification.

My invention has relation to apparatus for attaching or affixing to letters, papers, or packages articles coated with an adhesive, such as postage and revenue stamps, labels, and the like.

My invention has for one object an apparatus of the kind referred to of simple construction and in which the device which moistens the surface to which the stamp or the like is to be affixed is moved over or across such surface in one direction and held out of contact with said surface during its return movement.

The invention has for a further object certain other improvements in the operative devices and in their combination and coöperation, as hereinafter more fully set forth, and specifically pointed out in the claims.

Referring to the accompanying drawings, Figures 1 and 2 are vertical sectional views illustrating the operative mechanisms of the apparatus in their normal and in their effective or operative positions, respectively. Fig. 3 is a vertical sectional view of the apparatus, taken in a plane at right angles to the plane of section of Figs. 1 and 2. Fig. 4 shows the apparatus in front elevation. Fig. 4^a is a sectional elevation of a portion of the upper part of the apparatus, showing the means for releasing the follower or plunger when locked in the position shown in Fig. 4. Figs. 5 and 6 are detail vertical sectional views, on planes at right angles to each other, of the stamp-holder. Fig. 7 is a vertical section of the

stamp-retaining frame connectible with the stamp-holder; and Fig. 8 is an under side view thereof, while Figs. 9, 9^a, and 10 are fragmentary details of said frame; and Fig. 11 is a fragmentary detail of the carrier for the moistening device, showing a portion of the spray-pipe partly in section.

Referring to Figs. 1 to 4, A indicates the housing or casing, closed by a door A', and f' is a hollow rod guided centrally of said casing in a guide-sleeve e, the upper solid portion of said rod having a suitable hollow knob or handhold f secured thereto, the inner wall f² of the upper solid portion of rod f' forming an abutment for a follower-rod c', which is preferably tubular. Helical leaf-springs g g, one on each side of the central rod f', seat in sockets on the top of casing A and on the under side of the knob f, respectively, and hold the latter and the central rod f' in a normally-elevated position.

In the solid upper end of rod f' is formed a recess, below which is secured a spring-catch f³, and the guide-sleeve e has a chambered portion, with the roof or top s of which the aforesaid catch engages when the rod f' is depressed to its fullest extent, Figs. 4 and 4^a, to lock the same in that position for purposes hereinafter to be described. The release of the rod is effected by a push-button s', the stem of which works in an opening in the aforesaid chambered portion of sleeve e within reach of the catch f³ when locked to the top s of said chambered portion, Fig. 4^a.

Through one of the helical springs g extends a rod h, whose upper end is rigidly connected with the knob f, while its lower end has a laterally-enlarged tapering or wedge-shaped head h', impinging upon a lever m, pivoted at m' at the top of casing A and having bearing upon a compressible water reservoir or bulb l, having connected thereto a pipe l', terminating in a spraying-nozzle l², so that as the rod h is depressed the bulb l is compressed and water is sprayed from said nozzle. With the other helical spring g is arranged a rack-bar k, whose upper end passes through a suitable opening in the bottom of the hollow knob f and is prevented from dropping out by having its upper end bent at right angles, as shown in dotted lines at k', Fig. 1, the internal vertical area of the knob f being such as

to allow the rod h to be depressed to a sufficient extent to operate the spraying device before the rack-bar k is caused to move down under the pressure of the top wall of the knob f on the bent end k' of said rack-bar. The rod h and rack-bar k are properly guided in grooves formed in brackets r , depending from the top of the casing A , and said rack-bar is in perpetual gear with a pinion k^2 on a spindle k^3 , mounted in said casing and carrying a larger pinion k^4 in perpetual gear with a mutilated gear k^5 on a disk having a portion of its periphery toothed and mounted to revolve on a suitable stud projecting from one of the vertical side walls of the casing, as shown in Fig. 3. The gear k^5 has a radial projection, to which is secured one end of a bracket k^6 , having bearings for a brush-shaft k^7 , having secured thereto a brush p , which normally lies on or in front of the spraying-nozzle l^2 , hereinabove referred to and as shown in Fig. 1.

To prevent spattering of the water as the brush moves out of contact with the surface to be moistened and to prevent the dripping of water from the brush onto said surface when the bulb l is compressed, I inclose said brush in a sheathing of an absorbent material p' , preferably thin soft leather, whereby the surface to which the stamp is to be affixed is also more uniformly moistened than could be done by the brush itself.

Within the casing is secured a plate in which is formed a guide-track q , and the brush-shaft k^7 has secured to one end, which projects from its bearing at the free end of bracket k^6 , a weight k^8 , which has a central laterally-projecting pin k^9 resting on the guide-track in plate q , which latter and the pin k^9 form a support for the free end of the brush-shaft and its bracket k^6 .

The guide-track in plate q is of such irregular configuration that when wheel k^5 is revolved by pinion k^4 through pinion k^2 and rack-bar k in the direction of arrow, the brush p being in its normal position, Fig. 1, the pin k^9 on weight k^8 will first ride over the elevated or convex portion 2, thereby bringing the said brush into a perpendicular position relatively to the surface to be moistened and drawing said brush over said surface. As the wheel k^5 continues to revolve and the pin k^9 travels along the left side of the raised portion 2 of the track and along the substantially-vertical portion 3 of said track the brush is gradually turned from right to left until the pin k^9 reaches or is about to reach the upper portion 4, which converges from left to right toward the axis of rotation of wheel k^5 , so that its pin k^9 gradually moves toward said axis of rotation of wheel k^5 until the brush-spindle k^7 has moved to the left of a vertical line passing through said spindle and the axis of pin k^9 , carrying the weight beyond its dead-center and causing it to tilt from left to right, thereby tilting the brush-shaft k^7 in the same direction to bring the

brush p into a substantially-vertical position above the weight k^8 , as shown in dotted lines in Fig. 2. On the return movement of the rack-bar k under stress of the springs g the wheel k^5 is revolved in an opposite direction or from left to right, the pin k^9 on weight k^8 traveling along the guide-track portion 4 3, the brush-shaft being gradually turned, holding the brush p on a line substantially radial to the axis of wheel k^5 until said pin k^9 travels up and over the elevated portion 2 of the track, whereby the brush-shaft will be so turned as to hold the brush in a practically-horizontal plane, so that it crosses the surface to be moistened out of contact therewith. As the wheel k^5 completes its rotation from left to right the pin k^9 on weight k^8 travels down along the right side of the track portion 2, thence along the upwardly-curved portion 5 of said track, which portion 5 also converges toward the axis of rotation of wheel k^5 , so that when said pin k^9 has reached a given point along said curved track portion 5 the axis of the brush-shaft k^7 has moved to the right of a line passing through said shaft and pin k^9 or to the right of the dead-center of the weight, causing it to tilt to the left into a normal position, Fig. 1, with the pin k^9 on the elevated track portion 2 and the brush p in contact with spraying-nozzle l^2 .

In the hollow rod f' is fitted a plunger-rod c' , carrying a plunger c , preferably of an elastic material, as rubber, which plunger works in a stamp-holder consisting of a casing a , open at its lower end and closed at its upper end, except as regards an opening through which the plunger-rod c' passes, said holder being loosely mounted on said rod and containing a spring c^3 coiled about the rod and bearing against the top of the holder and the plunger c , respectively.

The stamp holder or receptacle a is suspended from the top of the main casing by springs a' , one on either side of the plunger-rod c' , and the stamps b , which are piled in the holder a below the plunger c , are prevented from dropping out of its lower open end by a frame d , detachably connected with said holder by means of spring-latches d^3 d^4 , secured to the frame and engaging slots in chambered projections on the holder, so that the frame d can be slipped onto the lower part of the holder, the springs d^3 lying in the chambered portion, while the stems of the latch-buttons engage slots extending upwardly from the lower edge of said chambers, thus locking the frame d to the holder by the stress of the springs only, so that said frame can be readily applied or removed. The frame d has supporting-ledges d' , one at each corner, for supporting the stamps, and about midway of the longer side bars of the frame are formed ledges d^2 , having knife-edges d^5 , Figs. 9, 9^a, and 10, acting also as supports for the pile of stamps.

Pressure on handle f will depress rods f' and h , the end h' of the latter compressing the

bulb *l*, thereby spraying the brush *p*, while the rack-bar *k* and plunger-rod *c'* will remain stationary, thus affording sufficient time for moistening the brush. As the handle is further depressed its upper wall contacts with the upper bent end *h'* of the rack-bar and depresses the latter, thereby moving the brush, as described, across the surface to be moistened and out of the line of motion of the plunger-rod *c'*. As soon as the brush has been moved out of the path of the plunger and stamp-holder the abutment *f*² in rod *f'* contacts with the plunger-rod *c'*, thereby depressing the plunger, together with the stamp-holder *a*, against the stress of the springs *a'*, from which said holder is suspended, until the frame *d* has bearing on the moistened surface. A further downward movement of the plunger *c* *c*² then forces the pile of stamps down against the stress of spring *c*³, the knife-edges *d*² cutting their way through the lowermost stamp, which is thus appressed to the moistened surface, so that on relieving the plunger-rod of pressure said lowermost stamp, adhering to the moistened surface, will be drawn out of the holder or frame *d*, as will be readily understood, the spring *c*³ retracting the plunger to a normal position, while the springs *g g* move the rod *h* and rack-bar *k* back to a normal position, thereby returning the brush *p* also to a normal position in the manner and by the means hereinbefore described.

The amplitude of the downward movement of the vertically-movable parts is such that the lower end of the stamp-holder may be projected out of the opening in the bottom of the casing *A*, as shown in Fig. 4, and locked into this position by a spring-latch *f*³, so that said holder may be taken hold of and pulled farther out of the casing against the stress of its springs *a'* until the spring-latch *t* engages the edge of the opening in the bottom of casing *A*. The frame *d* can now be readily removed for replenishing the supply of stamps in the holder when this becomes necessary.

In practice I construct the plunger, as shown, in two parts—namely, a cup-shaped head *c*, Fig. 5, in which is seated the rubber plunger *c*².

For the purpose of supplying the bulb *l* with water I provide a stop-cock *l*³ in nozzle-pipe *l'* and a flexible branch pipe *u*, connected with the pipe *l'* at a point between the bulb and stop-cock. By simply placing the end of branch pipe *u* into water and compressing the bulb and then relieving the same of pressure water will be drawn into said bulb in a well-known manner. The end of the flexible branch or supply pipe can be closed by any suitable means to prevent the escape of water therethrough whenever the bulb is compressed by lever *m*. This may also be done by means of rubber-faced rod *v*, secured to the door *A'* of the main casing at a proper point, so that when said door is closed the rod will exert sufficient pressure upon the end of said feed-pipe when placed against the

opposite wall of the main casing to close the passage through the pipe, as will be readily understood.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. A stamp-attaching apparatus comprising a device for moistening the surface to which the stamp is to be attached, a spraying-nozzle for spraying said device, a compressible liquid-holder connected with said nozzle, a stamp-holder open at one end, a plunger having motion in and with said stamp-holder, means permitting the plunger to be moved forcibly in one direction and for automatically returning it, in combination with mechanism operating to first compress the liquid-holder, then move the moistening device across the path of the stamp-holder and finally move said plunger and stamp-holder across the path of the moistening device, for the purpose set forth.

2. A stamp-attaching apparatus comprising a device for moistening the surface to which the stamp is to be attached, a spraying-nozzle for spraying said device, a compressible liquid-holder connected with said nozzle, a stamp-holder open at one end, a plunger having motion in and with said stamp-holder, means permitting the plunger to be moved forcibly in one direction and for automatically returning it, in combination with mechanism operating to first compress the liquid-holder, then move the moistening device across the path of the stamp-holder, and finally move the plunger and stamp-holder across the path of the moistening device, and means automatically returning said parts into their normal positions, for the purpose set forth.

3. In a stamp-attaching apparatus, a stamp-holder open at one end, and a frame separable from and applicable to said open end of the holder, said frame having corner-ledges for supporting the stamps, and like ledges projecting from the sides of the frame and having a cutter on their upper faces, for the purpose set forth.

4. In a stamp-attaching apparatus, the combination with reciprocating stamp-attaching appliances and a brush, of mechanism moving the brush across the path of said appliances and then reversing the position of said brush, causing the latter to recross said path in a reversed position and then returning the brush into its normal position, for the purpose set forth.

5. In a stamp-attaching apparatus, a brush-spindle, a weight provided with a pin projecting centrally therefrom, said weight secured eccentrically to one end of the spindle, a frame in which said spindle has its bearings, a gear-wheel at or near the periphery of which one end of the brush-spindle frame is secured, and mechanism revolving said gear-wheel; of the bearing-plate *q* provided with the irregular track 2, 3, 4, 5, in which the pin on afore-

said weight has bearing and is caused to travel when the gear is revolved, for the purposes specified.

6. In a stamp-attaching apparatus, the combination with reciprocating stamp-attaching appliances, a brush, and mechanism causing the brush to traverse the path of said stamp-attaching appliances; of a compressible liquid-holder, a spray-pipe connected thereto and lying in the path of the brush, and mechanism operated by the stamp-attaching appliances for compressing said liquid-holder when the stamp-attaching appliances are moved to attach a stamp, for the purpose set forth.

7. The combination with the casing A having an opening in its bottom, the hollow rod f' having an internal abutment f^2 , the plunger-rod c' working in rod f' , a stamp-holder on said plunger and having motion therewith and independently thereof, and springs acting on said rod f' , other springs acting upon plunger c' and stamp-holder; of a locking device for locking-rod f' and stamp-holder when moved against the stress of their springs to project said holder through the opening in the casing, for the purpose set forth.

8. The combination with the plunger and means for reciprocating the same; of a stamp-holder open at one end and mounted on said plunger, a spring interposed between the plunger and closed end of the stamp-holder, springs connected with a fixed support and with said holder, and a frame separable from

and applicable to the open end of the stamp-holder, said frame provided with a ledge d' in each corner and with inwardly and upwardly projecting cutters d^2 for the purpose set forth. 35

9. The combination with the plunger and means for reciprocating the same; of a stamp-holder open at one end and mounted on said plunger, a spring interposed between the plunger and closed end of the stamp-holder, springs connected with a fixed support and with said holder, and a frame separable from and applicable to the open end of the stamp-holder, said frame provided with a ledge d' in each corner and with inwardly and upwardly projecting cutters d^2 having lateral basal flanges d^5 , for the purposes set forth. 40 45 50

10. In apparatus such as described, the combination with the casing A having door A' and the bulb l having spray-pipe l' provided with a stop-cock and a compressible feed-pipe connected with said spray-pipe at a point intermediate of its stop-cock and said bulb; of means connected with the aforesaid door A' and compressing the feed-pipe when said door is closed to prevent water flowing through said feed-pipe, substantially as set forth. 55 60

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

ALWIN FRENTZEL.

Witnesses:

HENRY C. CARPENTER,
CHAS. E. CARPENTER.