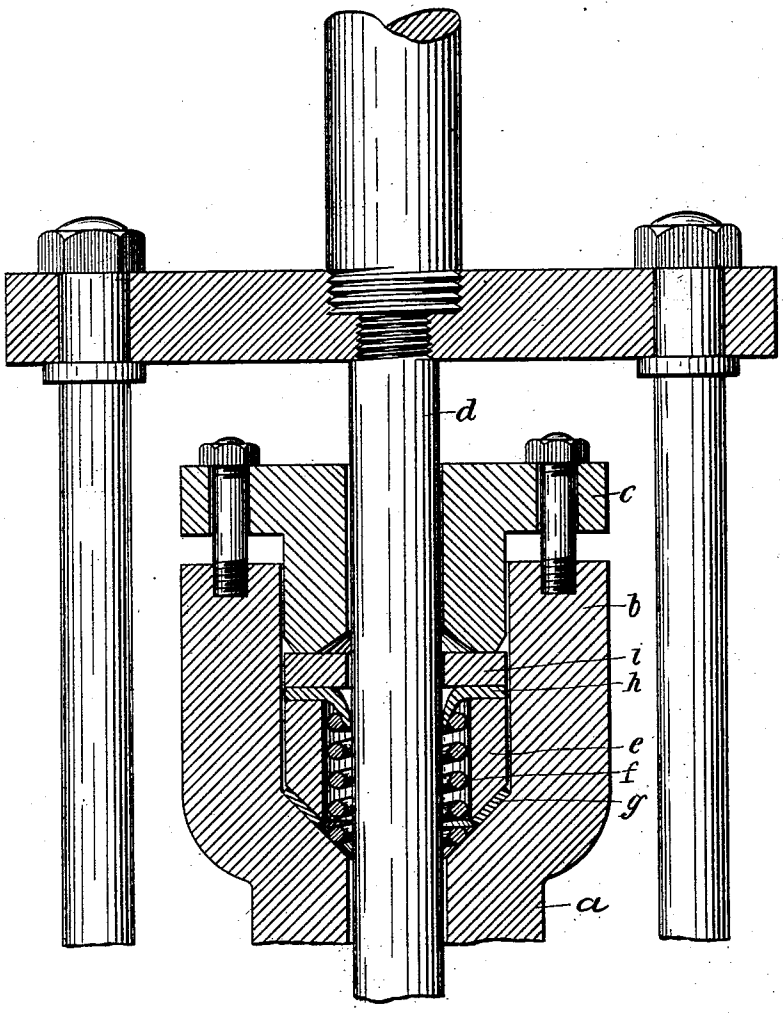
No. 653,983. Patented July 17, 1900.

W. BLACK.

PACKING.

(Application filed Mar. 17, 1900.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILBERT BLACK, OF NEW ORLEANS, LOUISIANA.

PACKING.

SPECIFICATION forming part of Letters Patent No. 653,983, dated July 17, 1900.

Application filed March 17, 1900. Serial No. 9,058. (No model.)

To all whom it may concern:

Be it known that I, WILBERT BLACK, a citizen of the United States, and a resident of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Packing, of which the following is a full, clear, and exact description.

This packing is especially adapted to packing the plungers of hydraulic and other plunger pumps; and the object sought is to provide a packing which may be readily applied to the stuffing-boxes of these pumps as usually constructed and which will pack the plunger so as to prevent the passage of fluids in both directions.

This specification is the disclosure of one form of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawing, forming a part of this specification, in which the figure represents a sectional view of the invention.

The packing is here shown as applied to a pump, the barrel *a* of which has a box *b*, to which is fitted a gland *c*, and in the barrel works a plunger *d*, all of which parts are of the usual construction. In the box *b* is placed a thimble *e*, which fits snugly against the interior walls of the box and which is of such interior size as to permit the plunger *d* to pass through it, leaving a space sufficiently large to receive an expansive spiral spring *f*, which is surrounded by the thimble and bears on the bottom of the interior of the box *b*. Usually the boxes are constructed with sloping bottoms, as shown in the drawing, and when this is the case the thimble *e* should be constructed to conform thereto. If the bottom of the box is square, the lower end of the thimble *e* should be shaped accordingly. Between the lower end of the thimble *e* and the bottom of the box *b* a washer *g*, of leather or like material, is interposed. The thimble *e* forms a case for the spring *g* and also forms at its upper end a seat for a packing-crimp *h*, of leather or the like, such crimp lying on top of the thimble and being turned downward thereinto, the crimp surrounding the plunger *d*, as shown, and being engaged on its under side by the upper end of the spring *f*. A ring *i* is set in the box *b* on top of the crimp *h* and is fastened down securely thereon by means of the gland *c*. By this arrangement the crimp *h* is held securely between the thimble *e* and ring *i*, and its inner portion, or that part which engages the plunger, is left free to accommodate itself to the movements of the plunger during the operation thereof. On the in or compressing stroke of the plunger the crimp *h* is forced outward against the plunger principally by the pressure developed within the barrel *a*. As the plunger returns or moves outward the spring *f*, acting on the crimp, will force it against the plunger to securely pack the same, and thus prevent the entry of air into the barrel during the outward movement of the piston, it being understood that a partial vacuum within the barrel during the outward stroke of the plunger is essential.

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

1. A packing, comprising a thimble adapted to sit in the packing-box, an expansive spring held in the thimble, a crimp mounted on the upper end of the thimble and turned into the same, the crimp surrounding the rod or plunger and being engaged by the spring, and a ring bearing against the crimp to hold it against the thimble.

2. A packing, comprising a flexible crimp surrounding the rod or plunger, means for holding the outer portion of the crimp, the inner portion being turned longitudinally of the rod to bear against the same and a spring pressing against the said inner portion of the crimp to engage it with the rod or plunger.

3. A packing, comprising a thimble adapted to sit in the packing-box and to bear on the bottom thereof, an expansive spring inclosed by the thimble, a crimp placed on the upper end of the thimble and surrounding the rod or plunger to pack the same, the crimp being turned into the thimble and engaged by the spring, and a ring bearing against the crimp to hold it engaged with the rod.

4. A packing, comprising a thimble adapt-

ed to sit in the packing-box, an expansive spring inclosed by the thimble, a crimp set on the upper end of the thimble and engaging the rod or plunger, the spring serving to engage the crimp, and a ring bearing against the crimp to hold it on the thimble.

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

WILBERT BLACK.

Witnesses:
JNO. DE BLOIS,
FRED. DEIBEL.