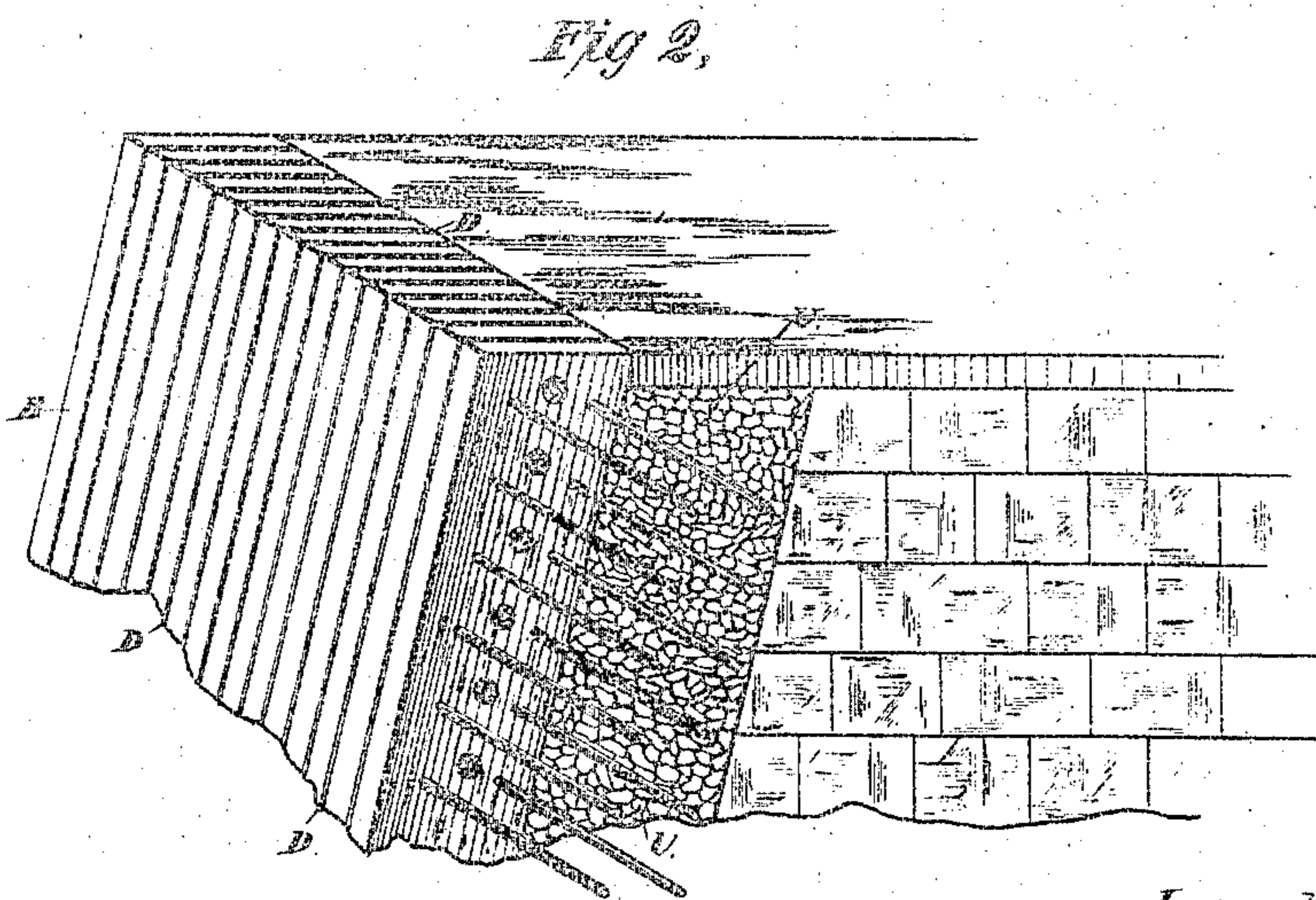
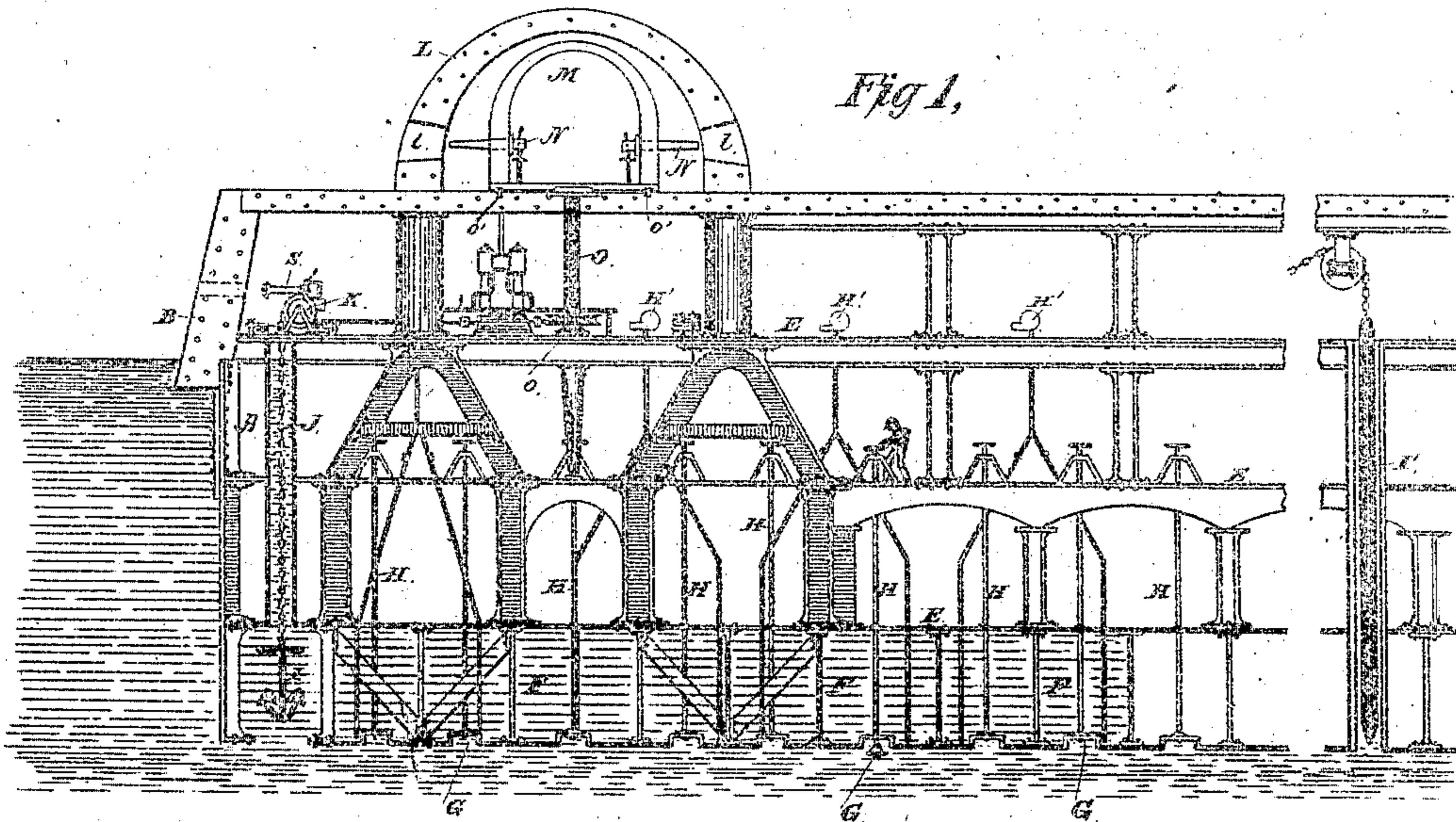


J. H. McLEAN & M. COLONEY.
Armor Clad Turret.

No. 239,524.

Patented March 29, 1881.



Attest:
Geo. T. Smallwood Jr.
Walter Allen

Inventors:
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Fig 3,

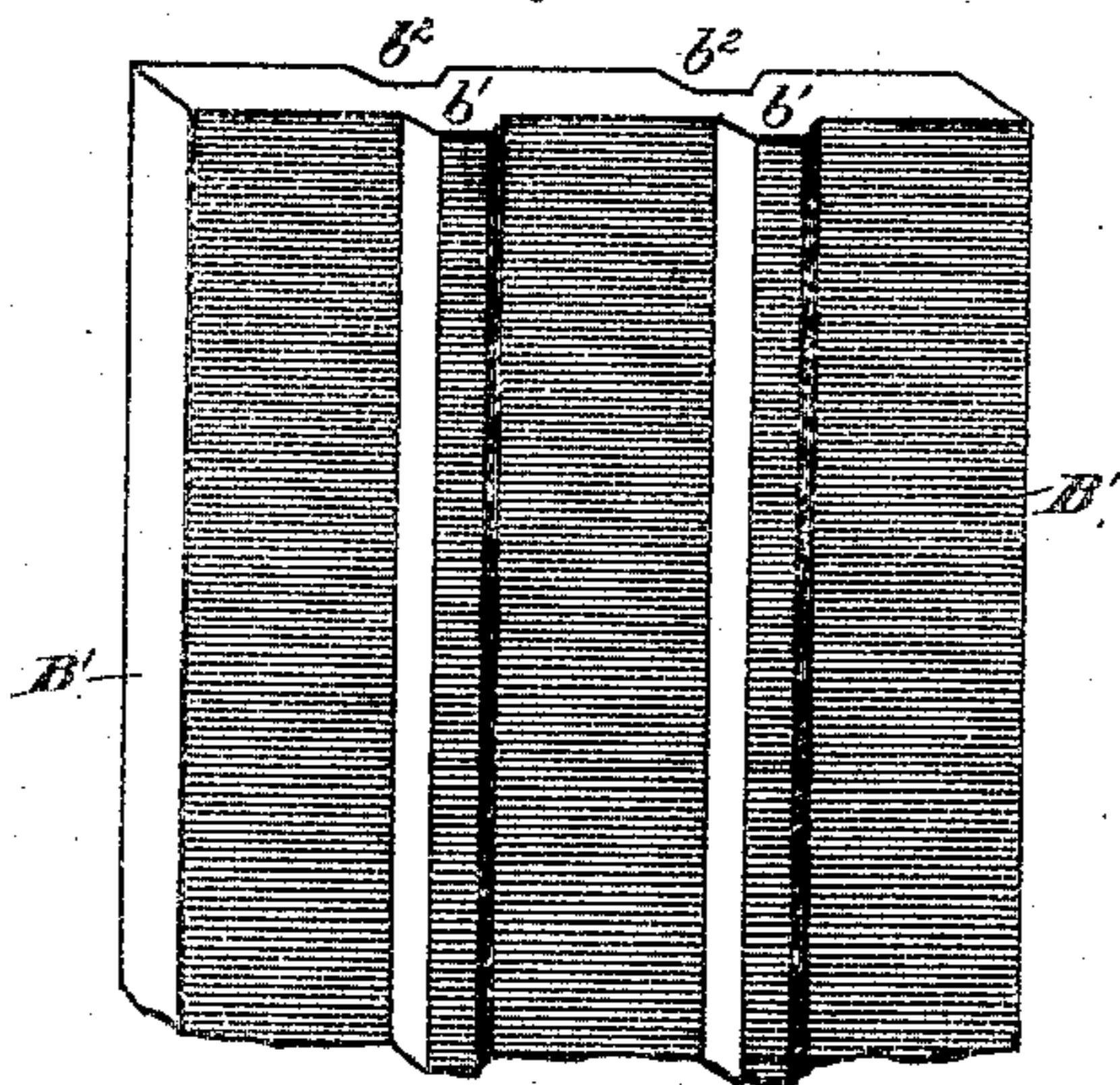
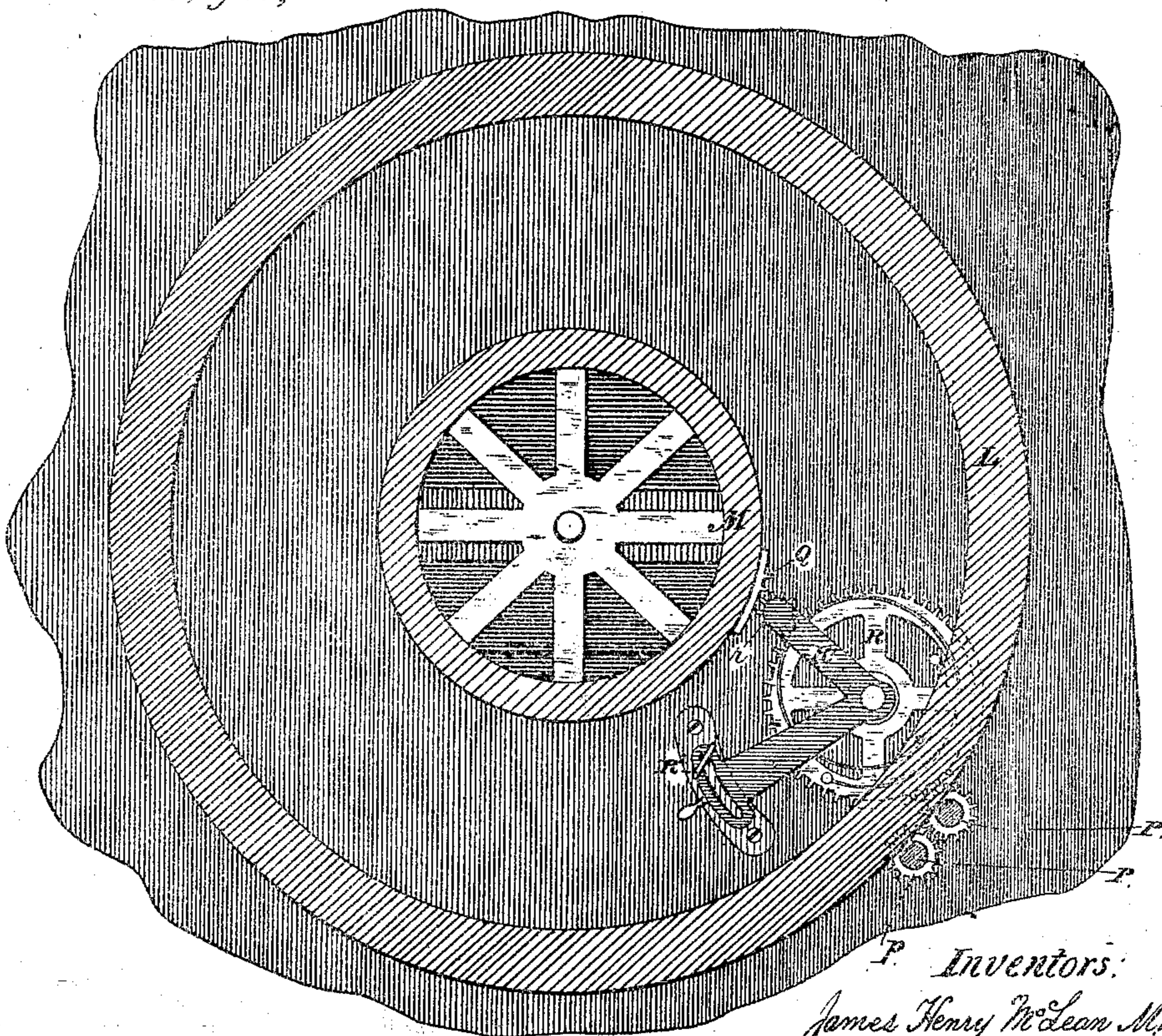


Fig 4,



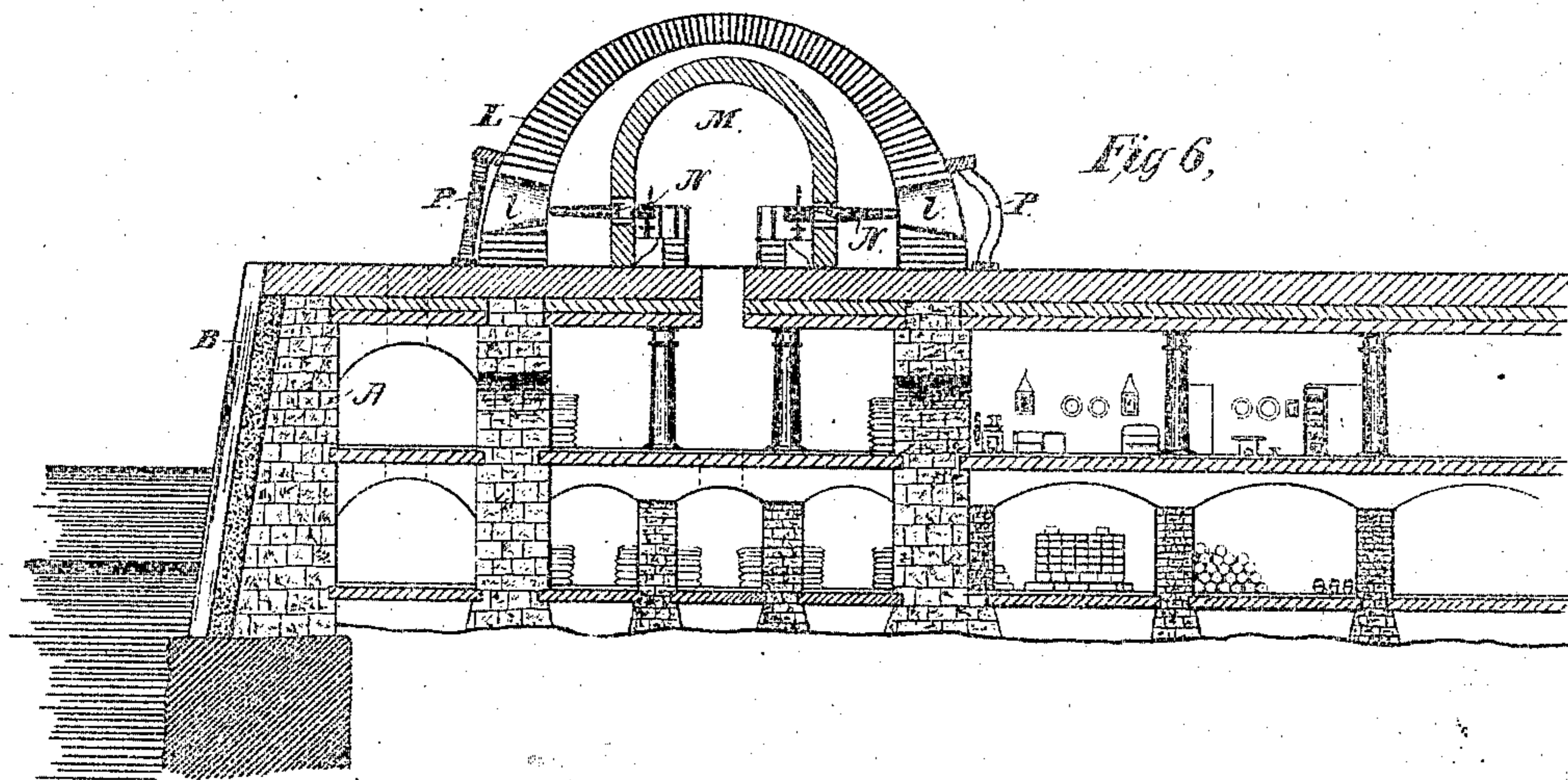
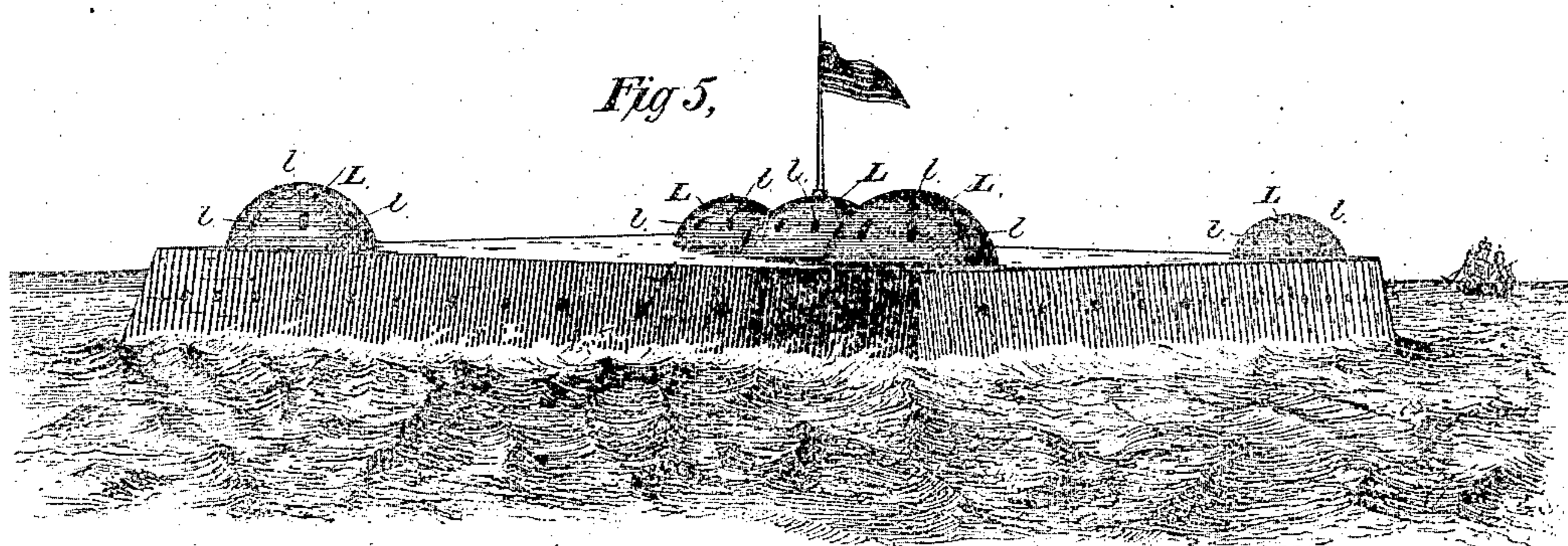
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UNITED STATES PATENT OFFICE.

JAMES H. McLEAN, OF ST. LOUIS, MISSOURI, AND MYRON COLONEY, OF NEW HAVEN, CONNECTICUT; SAID COLONEY ASSIGNOR TO SAID McLEAN.

ARMOR-CLAD TURRET.

SPECIFICATION forming part of Letters Patent No. 239,524, dated March 29, 1881.

Application filed February 13, 1880.

To all whom it may concern:

Be it known that we, JAMES HENRY McLEAN, M. D., and MYRON COLONEY, both citizens of the United States, residing respectively at St. Louis, Missouri, and New Haven, Connecticut, have invented new and useful Improvements in Armor-Clad Turrets, of which the following is a specification.

The subject of our invention is a floating fortress adapted to be moved from place to place by tugs or other means of propulsion, and lodged in position by the admission of water to its flotation-chambers, so as to lower it to the bottom where the water is not too deep, and where the water is deep to lower it beyond the reach of torpedoes, when it is fixed in position, by means of anchors of any preferred form, which may be raised or lowered at will, in chambers at the four corners of the fortress, or any other suitable places.

The invention consists, first, in the combination of an outer stationary turret and an inner revolving turret, as hereinafter described.

The invention further consists in the construction of a port-stopper, with a pair of oscillating jaws, mounted in the outer stationary turret, and opened and closed automatically by the revolution of the inner turret.

The invention further relates to a device for arresting the operation of the port-stoppers when required.

Some of our improvements are applicable to stationary and permanent, as well as to portable, forts.

In order that our invention may be more clearly understood, we will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a vertical section of a portion of a floating fortress, illustrating the first part of the invention. Fig. 2 is a perspective view, on a larger scale, of a portion of the armor-plating and its backing. Fig. 3 is a perspective view of the tongued and grooved key-plate. Fig. 4 is a detail view, illustrating the mode of operating the port-stoppers. Fig. 5 is a perspective of a floating fortress, illustrating the invention. Fig. 6 is a sectional view, illustrating the application of the invention to the construction of stationary forts.

A A represent the exterior walls of the fortress, constructed of sufficient thickness and strength to resist the exterior pressure of water and the attacks of torpedoes. The entire exterior above the water, and for a sufficient distance below the surface, is protected by armor B, consisting of plates presented edgewise, and preferably connected together by transverse bolts, as illustrated in Fig. 2; but inasmuch as it is impracticable without exposure of the fastenings, to surround the entire fortress with plates secured together by bolts in this manner, when a point is reached in the progress of the work where there is no longer room to insert the bolts C, we employ key-plates B', formed with tongues b' and grooves b'' , as illustrated in Fig. 3, which are inserted to close the gap between the first armor-plates B B.

D D represent plates of rubber or other elastic material, interposed between the armor-plates B B for the purpose of rendering the entire armor resilient under the impact of projectiles.

The interior of the fortress consists of any desirable number of stories or decks, E E E, and beneath the lower deck are water-tight compartments F F F, furnished with valves G, operated by rods H from one of the upper decks, so that water may be admitted to any desirable number of the compartments, while it is excluded from the others by the tight bulkheads between them and the independent valves with which the compartments are respectively furnished.

H' H' represent pumps for expelling the water from any or all of the compartments, when desired. By this means the entire fortress may be lowered or raised in the water as required, and retained at any desired depth of immersion. Where the water is not too deep it may be made to settle on the bottom for action. Where the water is deep it is to be lowered to the required depth and there retained by anchors I, which occupy chambers at the four corners or other desirable parts of the fortress, and are raised or lowered, as required, by chains J and windlasses K. Instead of anchors I, of ordinary construction, we use, when preferred, peg-anchors, simply driven down vertically, as shown at I'.

L L represent stationary turrets, of which there may be two or more on the summit of each fort, said turrets being constructed or covered with armor-plating arranged edgewise to the exterior, as already described, and being provided with any desirable number of port-holes, *l*, protected by port-stoppers, each consisting of a pair of jaws, P P, geared together by pinions *p*, so that they may be made to operate in unison to open and close the ports as required. Within each of the stationary turrets L is a revolving turret, M, provided with one, two, or more breech-loading guns, N, of the heaviest caliber.

O represents the vertical shaft of the revolving turret, which rests in a step, *o*, and is revolved by gearing in customary manner.

o' represents the usual anti-friction wheels or rollers on which the turret rests.

When the turret M is thus rotated the port-stoppers P P will open and close automatically, on the approach of either of the guns N to firing position, by means of cogs Q on the revolving turret, engaging with a loose pinion, *r*, which transmits motion to a toothed wheel, R, gearing with one of the pinions *p* in such a manner as to turn the jaws into open position on the approach of the gun, and so hold them as long as the gun is in position for firing, after which they are released and closed by springs, when they may be automatically locked by catches of simple construction, to be released by the rotation of the turret. The pinion *r* is carried by a lever, R', pivoted concentrically with the wheel R, and fixed in any position by a clamp-screw, R², so that the pinion may be moved out of reach of the teeth Q or placed so as to be engaged thereby, as required.

In the upper story of the fort, below the turrets L M, we arrange any desirable number of magazine battery-guns, as shown at S, so as to deliver their fire through suitable port-holes.

In applying our improvement to the construction of permanent fortifications we place behind the armor-plates B a backing of broken granite, as shown at U U. Such a backing may also be applied in a floating fortress by the addition of an inner casing or thin wall of iron plates.

Two hundred feet square will be a suitable size for our floating fortress, which may be provided with a central turret one hundred feet in diameter, inclosing an inner revolving turret fifty feet in diameter; or, if preferred, two or more smaller double turrets may be used in the sides or corners of the fortress.

It is believed that a fortress of this construction can be made impregnable by covering its upper works with suitable armor-plating to a sufficient distance below the low-water line, with the edgewise plates B B, six feet in thickness. The structures will be proof against torpedoes, because when in action they will usually come to anchor in water too shallow to admit of the fortress being completely submerged, while the two hundred feet square of iron bottom would afford a solid foundation to the fortress. Were it even possible that it could be sunk by a torpedo it would be practically impossible for the torpedo to approach the fortress from beneath, and such parts of the sides as are not protected by adequate armor-plating would be rendered practically invulnerable by the water backing contained in the compartments forming a resistance equal to that of the surrounding water, in which the exploding torpedo would operate.

The double turrets possess great practical value in preventing the disabling of the revolving turret; also, in protecting the occupants from the stunning effect of the impact of heavy projectiles, and from the suffocating gas, which is encountered in working guns in turrets as now constructed.

The heavy gun fits snugly in its embrasure in the inner turret, with only a peep-hole for sighting, the muzzle projecting into the space between the inner and outer turrets.

Having thus described our invention, the following is what we claim as new therein and desire to secure by Letters Patent:

1. An outer stationary turret and an inner revolving turret, combined substantially as herein described.

2. A port-stopper consisting of jaws or rollers P P, curved as shown, in combination with a revolving inner turret, and adapted to be opened and closed by the rotating inner turret, as set forth.

3. The combination of revolving inner turret having cogs Q, pinion *r*, toothed wheel R, and jaws P P, having pinions *p p*, as set forth.

4. The lever R', having pinion *r*, and the clamp-screw R², in combination with the toothed wheel R, and jaws P P, having pinions *p p*, as set forth.

JAMES HENRY McLEAN.
MYRON COLONEY.

Witnesses:

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ASA C. BUSHNELL.