(No Model.)

H. SEE.

CONNECTING ROD.

No. 254,707. Patented Mar. 7, 1882.

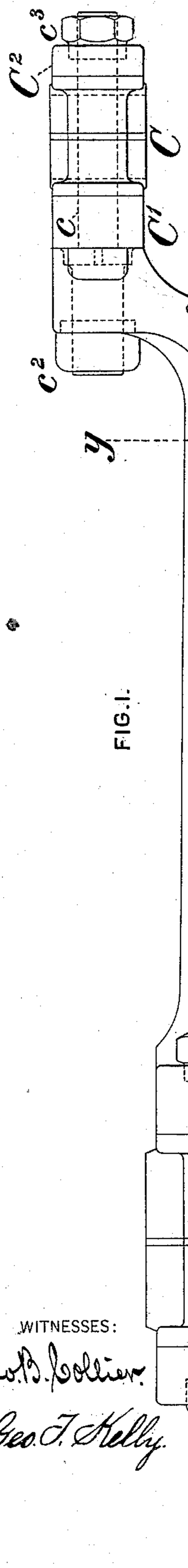


FIG. 1.

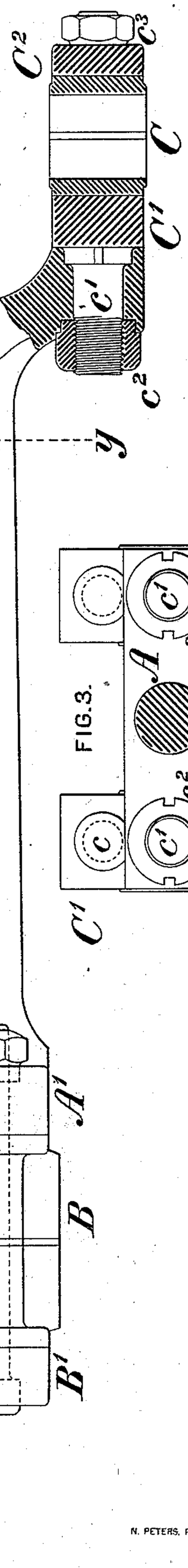


FIG. 2.

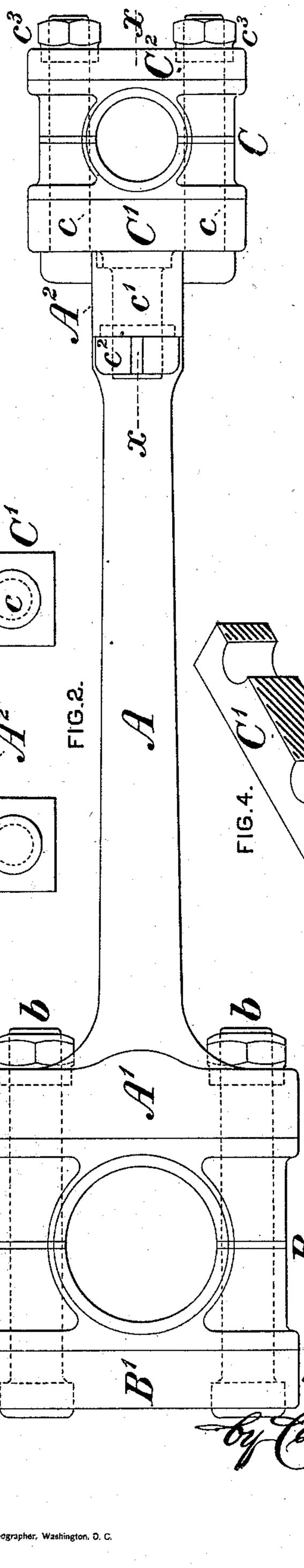
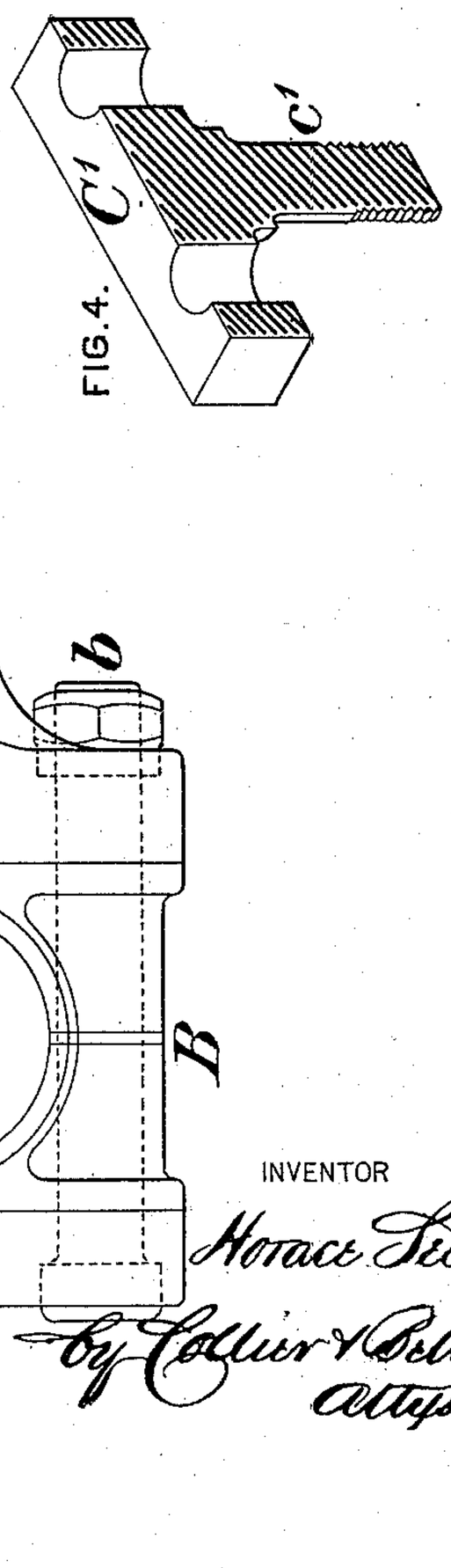


FIG. 3.

FIG. 4.



WITNESSES:

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INVENTOR

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UNITED STATES PATENT OFFICE.

HORACE SEE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO THE WILLIAM CRAMP & SONS SHIP AND ENGINE BUILDING COMPANY, OF SAME PLACE.

CONNECTING-ROD.

SPECIFICATION forming part of Letters Patent No. 254,707, dated March 7, 1882.

Application filed January 26, 1882. (No model.)

To all whom it may concern:

Be it known that I, HORACE SEE, of the city and county Philadelphia, in the State of Pennsylvania, have invented a certain new and useful Improvement in Connecting-Rods, of which improvement the following is a specification.

My improvement relates to the class of connecting-rods chiefly employed in marine steam-engines, in which, for the purpose of economizing room, the cross-head end of the rod is forked, so as to receive bearings on each side of the piston-rod for connection to pins on the cross-head. Inasmuch as the portions of the rod in which the bearings of the cross-head pins are fitted project from the rod at right angles to the bearing-surface of its opposite end, and must be made of sufficient strength and dimensions to provide proper accommodation for the pins which secure the cap, the forging and finishing of rods of this class, when of large size, is difficult and expensive.

It is the object of my invention to economize both time and material in manufacture without reduction of strength or interference with adaptability to existing engines; and to this end my improvement consists in a connecting-rod having detachable bearing blocks or sections, each fitted to receive a bearing and cap, and united to the head of the rod by a screw and nut. The improvement claimed is hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a view, partly in elevation and partly in section at the line *x x* of Fig. 2, of a connecting-rod embodying my improvement; Fig. 2, a view in elevation of the same at right angles to Fig. 1; Fig. 3, a transverse section at the line *y y* of Fig. 1, and Fig. 4 an isometrical sectional view of one of the bearing-blocks.

The body A of the rod and its head A′ at the crank end are of the ordinary construction, and the crank-pin bearings B and cap B′ are connected to the rod by bolts *b*, as is usual in approved practice. The head A^2 at the cross-head end of the rod is forged in one piece therewith, and projects from the body of the rod on each side of a shallow central recess, *a*. In connecting-rods having forked ends, as heretofore constructed, transverse projections were formed upon the ends of the head, the dimensions of which, as forged, were thus materially increased and additional labor involved in finishing. These projections are dispensed with under my invention, the head A^2 being forged and finished, as will be seen from Figs. 2 and 3, of uniform width throughout, and being but slightly greater in width than the largest diameter of the body A.

The support for the bearings C of the cross-head pins is provided by two separate bearing-blocks, C′, each having a central stem, *c′*, upon the outer end of which is cut a screw-thread, and which fits neatly in a corresponding socket in the head A^2, adjacent to one of its ends, the blocks C′ being secured to the head A^2 by nuts c^2, engaging the threads of the stems *c′*. Cap-bolts *c*, having nuts c^3, pass through openings in the blocks C′ and through the bearings C, and serve to secure the cap C^2 in position, and admit of the requisite adjustment of the bearings C.

The head A^2, being devoid of projections, can not only be more readily and perfectly forged than those of the ordinary form, but also involves less superfluous metal in the rough forging and less time and labor in finishing. The separate bearing-sections C′, being of comparatively small size and substantially rectilineal in outline, may be forged, finished, and secured to the head with corresponding facility, and the completed structure answers all the requirements, both of function and adaptability, which are possessed by the rods heretofore constructed.

I claim as my invention and desire to secure by Letters Patent—

In a connecting-rod, the combination of a head having a socket adjacent to each of its ends and two bearing blocks or sections, each abutting against the head, and having a central threaded stem fitting one of the sockets thereof and secured thereto by a nut, and being bored out on each side of the stem for the reception of a cap-bolt, substantially as set forth.

HORACE SEE.

Witnesses:
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