F. A. PRICE.

CURRENT MOTOR.

APPLICATION FILED MAR. 12, 1909.

950,676.

Patented Mar. 1, 1910.

2 SHEETS—SHEET 1.

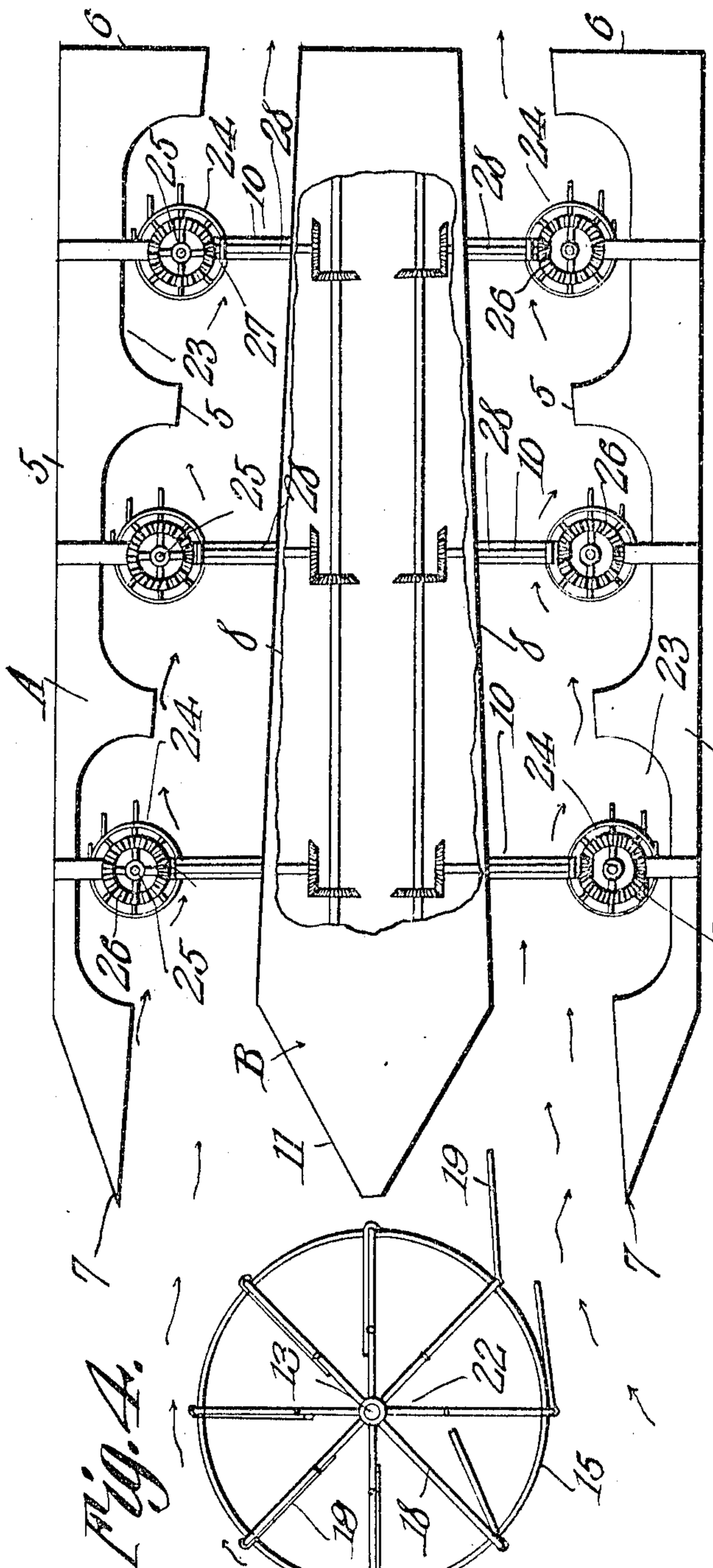

Fig. 1.

Fig. 4.

Fig. 5.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

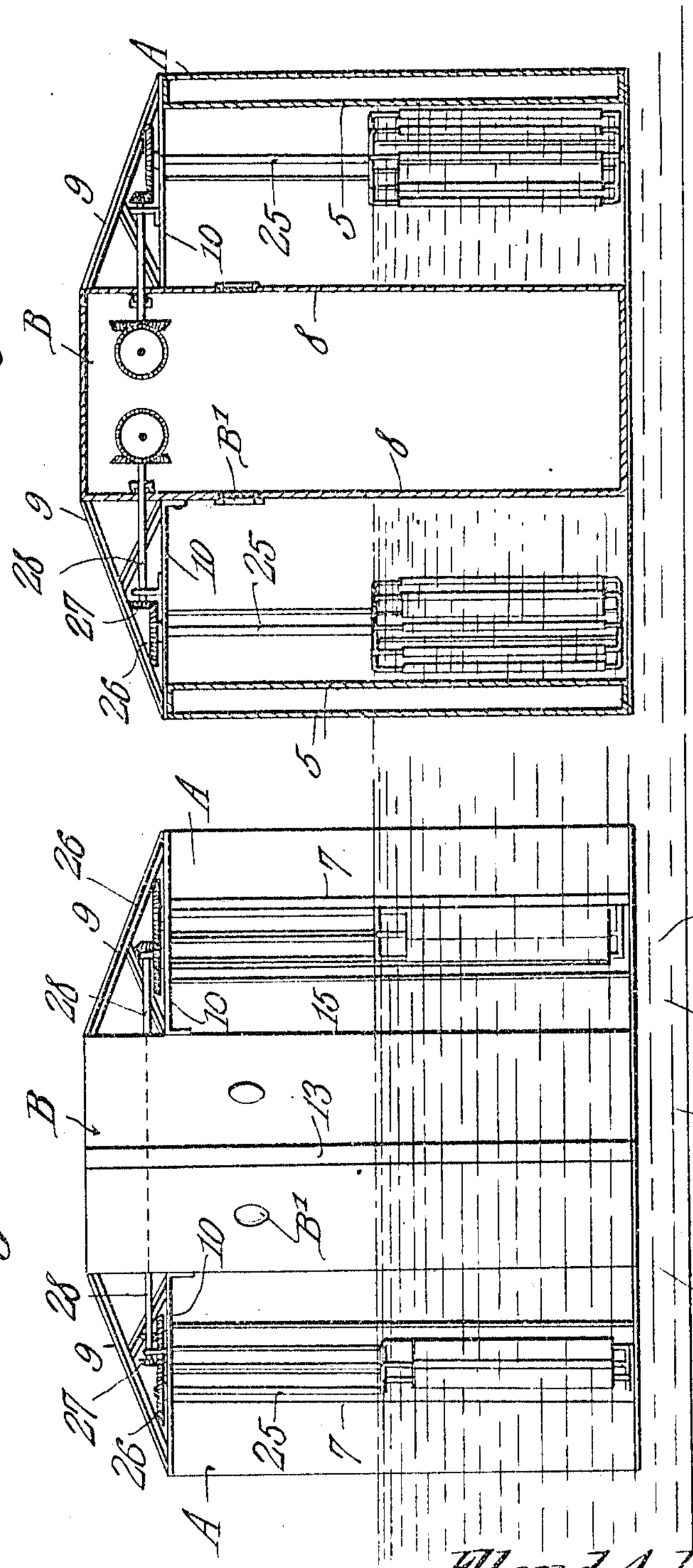

Fig. 2.

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UNITED STATES PATENT OFFICE.

FLOYD AUSTIN PRICE, OF COMPTON, CALIFORNIA.

CURRENT-MOTOR.

950,676. Specification of Letters Patent. Patented Mar. 1, 1910.

Application filed March 12, 1909. Serial No. 483,076.

To all whom it may concern:

Be it known that I, FLOYD A. PRICE, a citizen of the United States, residing at Compton, in the county of Los Angeles and State of California, have invented a new and useful Current-Motor, of which the following is a specification.

It is the object of the present invention to improve the construction of current motors by providing a motor of this class embodying such structural details as will provide for the generation of a maximum power.

In order to obtain a maximum power from an available head of water, the motor has been constructed, with a plurality of flumes in each of which there is arranged a series of water wheels, all of the several water wheels being geared in common with a single transmission element.

In the accompanying drawings, Figure 1 is a top plan view of a current motor constructed in accordance with the invention. Fig. 2 is a front end view thereof. Fig. 3 is a transverse sectional view therethrough. Fig. 4 is a top plan view in detail of one of the water wheels. Fig. 5 is a horizontal sectional view in detail through one of the water wheels illustrating a slightly modified structure.

As clearly shown in Fig. 1 of the drawings, the motor, includes in its structure, two body members which are indicated in general by the reference character A and an intermediate body member indicated in general by the reference character B, all three of the said members being preferably in the form of hollow floats and the intermediate member B, being preferably so constructed as to serve either wholly or in part, as a motor room in which may be arranged a generator to be driven from the power element of the motor, and to enable the attendant, within the member B, to observe the several power elements of the motor, suitable port holes B′ are arranged in the walls of the said member.

Each of the float members A has its side walls lying in planes converging toward the forward end of the motor as clearly shown in Fig. 1 of the drawings, the said side walls being indicated by the numeral 5, the rear ends of the members by the numeral 6, and their forward ends, which are pointed, by the numeral 7. As shown in the front elevation and transverse sectional view of the drawings, the float member B is of greater height than the members A although of the same length, and is disposed between the said members A with its side walls 8 in spaced relation with respect to the opposed or inner side walls of the members A, the three members being connected securely in this relation by means of suitable truss frames 9 and braces 10, which latter serve also an additional function as will be presently set forth.

It will be observed from the top plan view of the drawings (Fig. 1), that the opposed or inner side walls of the two float members A and the corresponding side walls of the intermediate float member B are located in planes converging in the direction of the rear or stern end of the motor, so that in effect a flume is formed between each of the float members A and the float member B, and that these flumes are gradually contracted or narrowed in the direction of the stern end of the motor.

Before proceeding to the description of the power element of the motor, it may be well to state that while in the drawings, the body of the motor is shown as comprised of three mutually connected float members an integral body having flumes corresponding to those above described, may be employed with equally desirable results, or that instead of the several float members, similarly formed structures of masonry may be provided by building up from the bed of the stream or similar body of water from which the power is to be procured. A shaft 20 is journaled longitudinally in the float member B, beneath the top wall thereof and to each side of the median line of the said float.

Each of the float members A is formed or constructed, in its inner side walls, with recesses or concavities 23 and these recesses or concavities are oppositely located in the walls of the two members, and mounted for rotation partly within each of the recesses is a power wheel 24 the said wheels being each supported by a shaft 25 which at its upper end carries a bevel gear 26 meshing with a bevel pinion 27 at the outer end of the countershaft 28 which is journaled upon the respective braces 10 and extends transversely of the motor and into the member B. A plurality of open frames radiates from the lower half of each shaft 25, and each of these frames include means comprised of an upper bar 15, a lower bar 16, and a vertical

connecting bar 17. Each frame also includes, in its structure, a vertical rod or bar 18 which extends parallel to the connecting bar or rod 17 and is preferably located at a point adjacent the shaft 13. A vane 19 is supported at one vertical edge upon each of the vertical connecting rods 17 and is free to swing thereon, and as will be observed from an inspection of Fig. 4, the current, which is flowing in the direction indicated by the arrows in the said figure, forces the vanes, at one side of the wheel, formed by the shaft 13 and the frames, to position against the respective vertical rods 18 so that these vanes will receive the full force of the current and the wheel will be caused to rotate, the vanes at the other side of the wheel, automatically feathering as the wheel rotates, as clearly shown also in the said figure. By this construction, practically no resistance is offered to the rotation of the wheel in the body of water in which the motor is arranged, and a maximum power is generated or in other words obtained from the current. Each of the shafts 28 carries at its inner end a bevel gear 29 which meshes with a similar gear 30 carried upon the corresponding one of the shafts 20 so that it will be understood that all of the power wheels 24 are geared with the shafts 20 so that the combined power units accumulated by the several power wheels will be applied in the rotation of the said shafts 20, the dynamo or other element to be acted upon, being driven from the said shafts in some conventional manner.

It will further be understood in connection with the foregoing description of the invention, that the water is directed by the abruptly converged walls 11 of the member B of the motor into streams, into the flumes formed between the side walls of the member B and the inner side walls of the members A, and that inasmuch as the power wheels 24 are arranged beside the inner walls of the members A, and the water tends to crowd to this side of each flume, a maximum power will be secured or obtained from the head of water.

In some instances, it may be found desirable or necessary to provide upon each frame of each power wheel, more than one of the vanes as illustrated in Fig. 5, and where such a construction is employed, a plurality of the vertical rods 18 are also provided, one for each vane upon each frame. It will be understood that by this arrangement of vanes, a working surface of greater area can be secured than by the employment of single vanes.

What is claimed is:—

1. In a current motor, hollow floats arranged in spaced relation and having front ends of less width than the rear ends and increasing in width from front to rear, an intermediate float of greater width near its front end than at its rear end and decreasing in width from front to rear, the side walls of the said intermediate float being spaced from the opposing side walls of the corresponding first mentioned floats, said side walls of the first mentioned floats being provided with pockets, and water wheels mounted in the pockets.

2. In a current motor, hollow floats arranged in spaced relation and having front ends of less width than the rear ends and increasing in width from front to rear, an intermediate float of greater width near its front end than at its rear end and decreasing in width from front to rear, the side walls of the said intermediate float being spaced from the opposing side walls of the corresponding first mentioned floats, said side walls of the first mentioned floats being provided with pockets, water wheels mounted in the pockets, power transmission shafts journaled in the intermediate float, and gearing between said shafts and all of said water wheels.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FLOYD AUSTIN PRICE.

Witnesses:
E. E. Elliott,
S. B. Smith.