

able, whereby to vary the position of the brushes on the commutator. 3rd. The combination in a dynamo having main and supplemental commutator brushes carried by two movable yokes, of a current regulator consisting of an electro-motive device responding to current changes, and a brush-shifting mechanism controlled by the electro-motive device and comprising a driven shaft, a lever geared to said shaft to be oscillated thereby, and mechanical connectors between the opposite arms of said lever and the respective brush yokes. 4th. The combination in a dynamo having main and supplemental commutator brushes carried by two movable yokes, of a current regulator consisting of an electro-motive device responding to current changes, and a brush-shifting mechanism controlled by the electro-motive device and comprising a driven shaft, a lever geared to said shaft to be oscillated thereby, and mechanical connectors between the opposite arms of said lever and the respective brush yokes, connected to the respective arms at different distances from the lever axis to communicate differential movements to the two yokes. 5th. The combination in a dynamo having main and supplemental commutator brushes carried by two movable yokes, of a current regulator consisting of an electro-motive device responding to current changes, and a brush-shifting mechanism controlled by the electro-motive device and comprising a driven shaft, a lever geared to said shaft to be oscillated thereby, and two rods jointed at one end to the opposite arms of the lever and at their opposite ends to the respective brush yokes. 6th. The combination in a dynamo having main and supplemental commutator brushes carried by two movable yokes, of a current regulator consisting of an electro-motive device responding to current changes, and a brush-shifting mechanism controlled by the electro-motive device and comprising a driven shaft, a lever geared to said shaft to be oscillated thereby, and two rods jointed at one end to the opposite arms of the lever and at their opposite ends to the respective brush yokes, and the lever constructed to admit one of the rods to be adjusted relatively to the other to varying distances from the lever axis, whereby the speed ratio of the respective yokes may be varied. 7th. The combination in a dynamo having main and supplemental commutator brushes carried by two movable yokes, of a current regulator consisting of an electro-motive device responding to current changes, and a brush-shifting mechanism controlled by the electro-motive device and comprising a lever Q , and two rods jointed to the opposite arms of the lever and connected to the respective brush yokes, the lever constructed with a socket j in one arm for connection with the rod leading to one brush yoke, and with a slot j^1 in the opposite arm for adjustable connection with the rod leading to the other yoke. 8th. The combination in a dynamo having main and supplemental commutator brushes carried by two movable yokes, of a current regulator consisting of an electro-motive device responding to current changes, and a brush-shifting mechanism controlled by the electro-motive device and comprising a lever Q , and two rods jointed to the opposite arms of the lever and connected to the respective brush yokes, the lever constructed, the duplicate slots in its opposite arms adapted to admit the connection of the respective rods at unequal distances from the lever axis to communicate differential movements to the yokes, while permitting the adjustment of one connection relatively to the other for varying the speed ratio of the yokes, and to admit the reversal of the connection of the rods with the respective arms, the one connected farthest from the axis being adjusted inwardly and the other outwardly to reverse the differential movements. 9th. The combination in a dynamo having main and supplemental commutator brushes carried by two movable yokes, and a current regulator comprising an electro-motive device and brush-shifting mechanism for imparting differential movements to the respective yokes, of means for enabling the direction of rotation of the armature to be reversed at will, consisting of detachable and reversible connectors forming part of the brush-shifting mechanism, and constructed to permit the brush yokes to be disconnected and swung to opposite positions corresponding to the opposite rotation of the armature, and to be then reconnected with the brush-shifting mechanism in inverse order so as to maintain after reversal the same relative differential movements of the respective yokes. 10th. The combination in a dynamo having main and supplemental commutator brushes carried by two movable yokes, and a current regulator comprising an electro-motive device and brush-shifting mechanism for imparting differential movements to the respective yokes, of means for enabling the direction of rotation of the armature to be reversed at will, consisting of detachable arms n, n^1 connected to the respective yokes, and rods h, h^1 constituting part of the brush-shifting mechanism, and the yokes constructed to admit of the attachment of said arms to them in different positions, whereby the arms may be detached from the yokes, the yokes swung to opposite positions, and the arms reattached. 11th. In a dynamo having main and supplemental commutator brushes carried by two movable yokes, and a current regulator comprising an electro-motive device and brush-shifting mechanism for imparting differential movements to the respective yokes, the combination of the yokes H, H^1 each constructed with two screw sockets, detachable arms n, n^1 adapted to screw into either of said sockets, and filling screws V, V^1 for closing the unoccupied sockets. 12th. In a dynamo having a base and bearing pedestals mounted thereon, having bearings for the armature shaft, a current regulator for shifting the commutator brushes comprising opposite clutches and connecting gearing housed within one of said pedestals, and mechanical connections between the driven members of said clutches

and the brush yokes, carried by said pedestal. 13th. In a dynamo having a base A^1 and bearing pedestals O, O^1 mounted thereon, a current regulator for shifting the commutator brushes comprising opposite clutches housed within the pedestal O , and mechanical connections between the driven members of such clutches and the brush yokes comprising gearing and a shaft J having bearings in said pedestal, and a lever Q having a bearing upon the exterior of said pedestal. 14th. In a dynamo having a base A^1 and bearing pedestals O, O^1 mounted thereon, a current regulator for shifting the commutator brushes comprising opposite clutches housed within the pedestal O , and mechanical connections between the driven members of such clutches and the brush yokes carried by said pedestal, and a separate pedestal R within the pedestal O affording bearings for the clutches. 15th. In a dynamo having a base A^1 and bearing pedestals O, O^1 mounted thereon, a current regulator for shifting the commutator brushes, comprising shafts p and r^1 , two opposite clutches, a driven shaft f housed in the hollow pedestal O , and mechanical connections between the latter shaft and the brush yokes, and a pedestal R within the pedestal O , and providing bearings for said shafts p, r^1 and f . 16th. In a dynamo having a base A^1 and bearing pedestals O, O^1 mounted thereon, a current regulator, comprising opposite clutches and connecting gearing housed within the pedestal O , a clutch-lever I for operating said clutches also housed within said pedestal, a controlling magnet M outside the pedestal, and mechanical connections between said magnet and clutch lever passing through the pedestal. 17th. In a dynamo having a base A^1 and bearing pedestals O, O^1 mounted thereon, a current regulator, comprising opposite clutches and connecting gearing housed within the pedestal O , and a clutch-lever I for operating said clutches also housed within said pedestal, a controlling magnet outside the pedestal, and elbow-lever L passing through said pedestal, and a link l for connecting with said clutch lever. 18th. In a dynamo having a base A^1 and bearing pedestals O, O^1 mounted thereon, a current regulator, comprising opposite clutches and connecting gearing housed within the pedestal O , a clutch-lever I for operating said clutches also housed within said pedestal, a controlling magnet M mechanically connected to said clutch-lever, a retracting spring within the pedestal connected to said clutch-lever, and an adjusting device for said spring outside the pedestal. 19th. In a dynamo having a base A^1 and bearing pedestals O, O^1 , a current regulator, comprising opposite clutches and connecting gearing housed within the pedestal O , a clutch-lever I within the pedestal, a controlling magnet M outside the pedestal, mechanical connections between said magnet and lever, comprising a lever L passing through the pedestal, and a bearing block t fastened to the pedestal formed with opposite stops to limit the movement of said lever L , and formed with bearings to which said lever L is pivoted. 20th. In a dynamo, a current regulator, comprising opposite clutches and brush-shifting mechanism driven thereby, a clutch-lever I for operating said clutches, an adjustable retracting spring S controlling the magnet M , having an armature M^1 , mechanical connections between said armature and lever I , said connections comprising a lever L , and a spring pressing upwardly against said lever L to counterbalance the weight of the lever and armature. 21st. In a dynamo, the combination with a current regulator of the class wherein a shifting mechanism is connected to a source of power by the action of an electro-motive device against a retractive force, of a movable stop constructed as a hook P adapted to engage a projection t^1 connected with the electro-motive device, and thereby to resist the retractile force to hold the dynamo out of action, and unbalanced so as to fall out of engagement when the electro-motive device overcomes the retractile force. 22nd. In a dynamo, in combination with a current regulator for shifting the commutator brushes wherein the brush-shifting mechanism is controlled by an electro-magnet acting against a retractile force, a lever L connected to said magnet having a projection t^1 , a bearing block t , and a gravity hook P pivoted to said bearing block, and adapted when turned up to engage said projection. 23rd. In a dynamo, a current regulator, comprising opposite clutches, consisting each of a driving and driven part, the one constructed as a wheel with an internal coned flange and the other as a disc with an external cone fitting in said flange, said externally coned disc being formed with radial slots 13. 24th. In a dynamo having a current regulator partly housed within one of the bearing pedestals, the pedestal O constructed with opposite hand-holes combined with hand-hole covers W for closing said holes, and means for fastening them to the pedestal. 25th. In a dynamo having a current regulator partly housed within one of the bearing pedestals, the pedestal O constructed with opposite hand-holes combined with hand-hole covers W for closing said holes, each constructed with lugs η^1 projecting into the hole, and with a fastening device consisting of a bar W^2 adapted to be turned to engage the margins of the hole. 26th. In a dynamo having the armature shaft K mounted on bearing pedestals O, O^1 , the combination of the brush yokes, a concentric bearing ring a on which said yokes are mounted, and the lower half T of the bearing box on the pedestal O , to which said ring is attached independently of the bearing cap, whereby the bearing cap T^1 may be removed without disturbing the brush yokes. 27th. In a dynamo wherein the armature shaft K is supported on bearing pedestals O, O^1 , the pedestal O formed with the lower half T of the bearing box, the upper half or bearing cap T^1 thereof removably attached thereto and formed with internal ribs η , an enclosed bearing bushing in two halves U, U^1 supported within