

and means for moving it, consisting of the rack extension *g*, the gear wheel *H*, the pinion, and the segmental gears meshing alternatively with said pinion, substantially as described. 6th. In a box machine and in combination, with folding mechanism, a strip holder and a steam supply pipe leading thereto, substantially as described. 7th. In a box machine and in combination, folding mechanism, a strip feed slide, the segmental gears *h*, having connection to the feed slide for operating it, said gears being adjustable in relation to each other, substantially as described. 8th. In combination, in a box machine, a strip holder, a table, a former, folding means operating through the table, a feed slide to push the strips over the folding means, and a folding arm, substantially as described. 9th. In a machine for making boxes from wooden strips, the combination, of a folding form, pivoted folding wings, a folding arm, and a driving shaft, and connection between said driving shaft, folding wings and folding arm, substantially as described. 10th. In a machine for making boxes, the combination, of a laterally adjustable folding form, the pivoted folding wings, one of which is adjustable, the driving shaft and connection between said driving shaft and folding wings substantially as described. 11th. In combination, the table, the strip folding mechanism, the feed slide, and a guide *t* for the strip to regulate its position, substantially as described. 12th. In combination, the table, the strip folding mechanism, the feed slide, a guide *t* for the strip, a presser rod *Y*, and operating means to operate the same, to force the strip against the guide, substantially as described. 13th. In combination, the table, the strip feed slide and folding mechanism, a guide for the strip adjustable presser rod *Y*, and a yielding connection *x* in the operating means, substantially as described. 14th. In combination, the table, the strip feed slide and folding mechanism, a guide *t* for the strip, a discharge slide *N*, and means for operating the guide vertically through the table, substantially as described. 15th. In combination, the table, the strip feed slide and folding mechanism, a vertically movable guide, the lever *u* connected thereto, the cam for depressing the guide, and the weight having the adjustable stop *u*³, substantially as described. 16th. In combination, the table, the strip feed slide and folding mechanism, the discharge slide and means for operating the same consisting of the lever *u*¹, the arm *n*³, *n*², connected thereto below and above the pivot, and the cam wheel *X* having a stud, substantially as described. 17th. In combination, the former adjustable laterally and the discharge slide adjustable therewith, substantially as described. 18th. In combination, the table, the strip feed slide and folding mechanism, means for feeding the bottoms to the strips, and a guide *t*⁴, against which the strip bears, and which directs the bottom into place, substantially as described. 19th. In combination, the table, the strip holder, feed slide and folding mechanism, the bottom feeding means, the guide *t*⁴, and the spring presser bars *p*¹ to direct and hold the bottoms, substantially as described. 20th. The combination of the holder for the box bottoms, a vertically moving arm for placing the box bottoms successively in position, a folding mechanism for folding the previously grooved strip around the bottom, substantially as described. 21st. The combination of a holder for the box bottoms, a vertically moving arm for placing the box bottoms successively in position, folding mechanism for folding the previously prepared grooved strip around the bottom, means for placing the folded box under the presser bar *P*, and the presser bar for uniting the free ends of the folded strips, and thus completing the box, substantially as described. 22nd. In combination, the table, the former, the folding wings *K*, *K*¹, and means for operating the folding wings, consisting of the cross head *U* with operating connections to the main shaft, substantially as described. 23rd. In combination, the former, the folding arm *M* and the wings, the presser bar *P* in rear of the former having connections to the main shaft, and the discharge slide *n* operating to move the folded box from the former to the presser bar, substantially as described. 24th. In combination, the table, the strip feed slide, the former and folding mechanism, a presser mechanism in rear of the former, and a discharge slide to move the box from the presser mechanism. 25th. In combination, the table, the strip feed slide, the former, and folding mechanism, a presser box consisting of the adjustable standards *Q*, *Q*¹, a presser bar *P*, and operating means therefor. 26th. In combination, the former and folding mechanism, a presser with operating means for pressing the box vertically and laterally. 27th. In combination, the table, the strip feed slide, the former and folding mechanism, a presser bar *B* operating vertically, and a second bar for pressing the box laterally, substantially as described. 28th. In combination, the table, the strip feed slide, the former and folding mechanism, a presser mechanism including the presser bars *P* and *P*¹, means for adjusting said bars laterally and vertically, substantially as described. 29th. In combination, the former and folding mechanism, the presser box, and presser mechanism, the spring *O* in the presser box and discharge slide, substantially as described. 30th. In a box machine, the adjustable former, the adjustable folding wings, and an adjustable arm, substantially as described. 31st. In combination, the former and folding mechanism, with feeding mechanism for the strips and bottoms, the ways *W*, having an opening *W*¹ at their forward ends, and means for adjusting the ways, substantially as described. 32nd. In combination, the former and folding mechanism, with feeding mechanism for the strips and bottoms, the ways *W*, and the vertically adjustable plates *W*¹ carrying said ways, substantially as described. 33rd. In a box machine, the combination of the box former, the folding wings, the upper folding arm, ways *x* forming a chute or holder for the box bottom

blanks, and a sliding cross head as *T* for feeding the bottom blanks singly downward, substantially as described. 34th. In a machine for making boxes, the combination, with the former and with the folding wings and folding arm, of the ways *W* for the box bottom blanks, and the cross head *T*, having the needle arms *t*¹, *t*¹, and the spring *t*², substantially as described. 35th. In combination, the former, the strip feed slide, the folding wings, the upper folding arm, the cross head *M*³ for operating the same, the feed arms for bottoms, the cross head *T* and the racks and pinion connection between the cross heads, substantially as described. 36th. A machine for making boxes by folding grooved wooden strips around bottom blanks, consisting essentially of the following elements, a holder for the strips, a pusher for placing the strips separately to be folded, mechanism for folding the grooved strips around the bottom, and pressing devices for uniting the free ends, all substantially as described. 37th. In combination, the former a pair of folding wings to form three sides of the box, and a folding arm to fold down the fourth side of the box, substantially as described.

No. 40,559. Journal Bearing. (*Coussinet de tourillon*.)

Francis Bowen Torrey, Bath, Maine, U. S. A., 4th October, 1892; 6 years.

Claim.—1st. A method of making anti-friction bearings, consisting in subjecting a composite material to pressure within a shell or casing between a former and the said shell or casing and in confining the said material after compression. 2nd. A bearing consisting of a shell or bushing having a lining built up of a composite material interposed between a flange at one end and a confining ring at the other. 3rd. A bearing consisting of a series of rings having a composition of lignum vitae and plumbago interposed between them and under compression. 4th. A bearing consisting of a series of rings with a composite material interposed between them substantially as described. 5th. A bearing consisting of a series of rings, each ring provided with a series of open sided slots, and a composite material compressed within said slots, the slots alternating in position, substantially as described.

No. 40,560. Bell Buoy. (*Bouée à cloche*.)

Jasper Gibson, 51 Lincoln's Inn Fields, London, England, 4th October, 1892; 6 years.

Claim.—1st. In a bell buoy, the combination of a fog bell *C* with apparatus for accumulating the power generated by the rising and falling of the float *D*, contained within a well *d* formed in the body of the buoy substantially as described and illustrated in the accompanying drawings. 2nd. A bell buoy constructed with a well for containing a float *D* water ways *a* leading to the said float and shutters *J* for automatically closing said water ways substantially as described and illustrated in the accompanying drawing.

No. 40,561. Bell Buoy. (*Bouée à cloche*.)

Jasper Gibson, 51 Lincoln's Inn Fields, London, England, 4th October, 1892; 6 years.

Claim.—1st. In a bell buoy such as described, the employment of a disc or wheel such as *E*, mounted so as to revolve on a central spindle *D*, and carrying clappers *E*², substantially as described. 2nd. In a bell buoy, the combination of the bell *E*¹, weighted revolving disc *E*, and clappers *E*², substantially as described, and illustrated in the accompanying drawing. 3rd. In a bell buoy the combination of the bell *E*¹, weighted revolving disc *E*, clappers *E*², and limiting ring *e*¹, substantially as and for the purpose herein described, and illustrated in the accompanying drawing. 4th. The complete bell buoy, constructed substantially as and for the purpose described and shown in the accompanying drawing.

No. 40,562. Gear for Vehicles. (*Train de voiture*.)

Thomas Randall Capwell and William Carl Fuller, both of Dunkirk, New York, U.S.A., 6th October, 1892; 6 years.

Claim.—1st. The combination, with the axles, wheels and hounds, and the reach connecting them, of a false reach consisting of sections pivotally connected together, one section being secured by the front king bolt and to the rear bar of the hounds, and the other section being provided with a slot in its rear end, through which the rear king bolt passes, and having its front end extended forward and engaging with said hound bar, a slide through which the rear reach section passes, and lateral braces connecting said slide to the axle adjacent to the wheels.

No. 40,563. Underground Conduit for Electrical Conductors. (*Conduit souterrain pour conducteur électrique*.)

James Fulton Cummings, Detroit, Michigan, U.S.A., 6th October, 1892; 6 years.

Claim.—1st. In an underground conduit for electrical conductors, the combination, of an inner casing and an outer casing concentrically arranged, of a spacing device between the two forming a continuous annular chamber from end to end, and a non-conducting insulating compound filled in said chamber, substantially as de-