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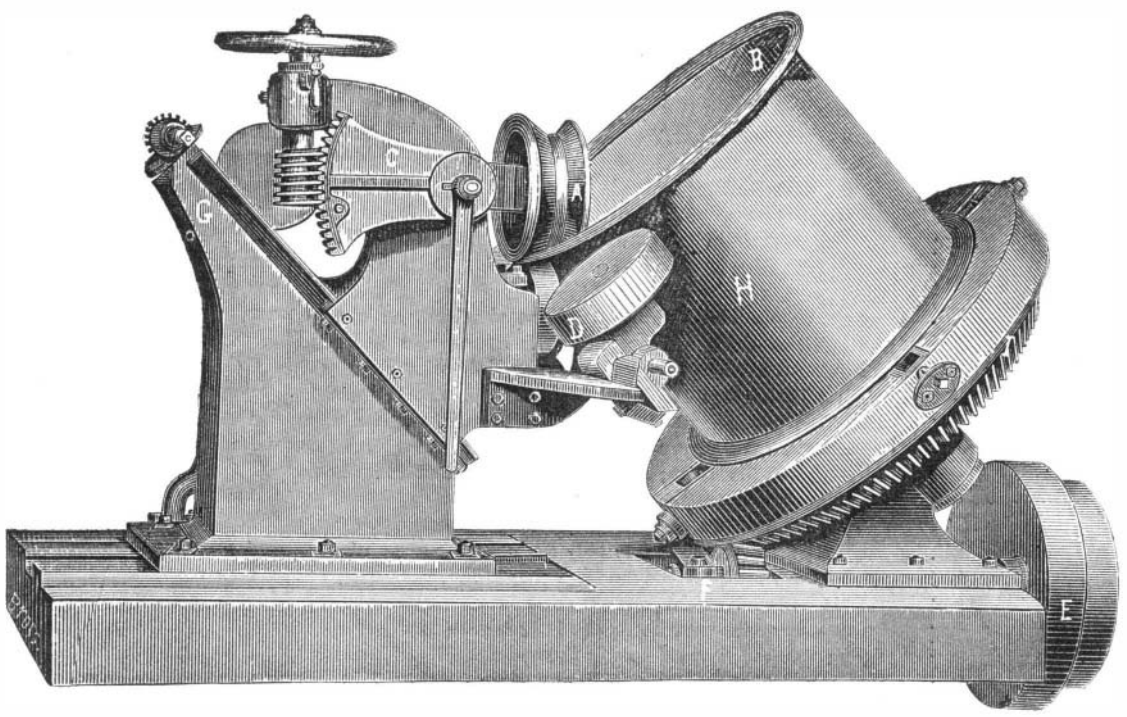
IMPROVED FLANGING MACHINE.

We illustrate herewith a machine for forming flanges on metal bars, and on plates for constructing boilers and other vessels. It is the invention of Mr. David Hanson, of England, and attracted much attention at the Vienna Exposition.

A is a steel roller, revolving upon a bearing on the end of the segmental rack, C, the angle of the roller, A, to the flange, B, being adjusted by means of the rack, C, and the worm wheel attached thereto. B is the turning or bending flange of the cylinder, H, which can revolve by friction, but whose position is at all times stationary. The distance between the roller, A, and the flange, B, is adjusted, to suit various thicknesses of plate, by means of the slide upon which the head carrying the roller, A, and its attachment is affixed, the head being operated by the bevel gears, G, and a screw and nut operating upon the head in the center of the slide. H is the revolving cylinder, driven by the gearing, J, operated by the pulley, E. The roller, D, serves to guide and steady the cylinder, H, which would otherwise be apt to spring from its duty. In operation, the roller, A, is set to the required angle of flange to be made, and the head and roller, A, are set to suit the thickness of the metal to be flanged; then the slide set screws are set up to relieve the worm and rack, C, of any strain. The work is then passed between the roller, A, and the flange, B, the latter carrying the plate through and the former revolving by friction.

The machine is substantially made, and is well proportioned in all its parts and it is of simple and durable construction.



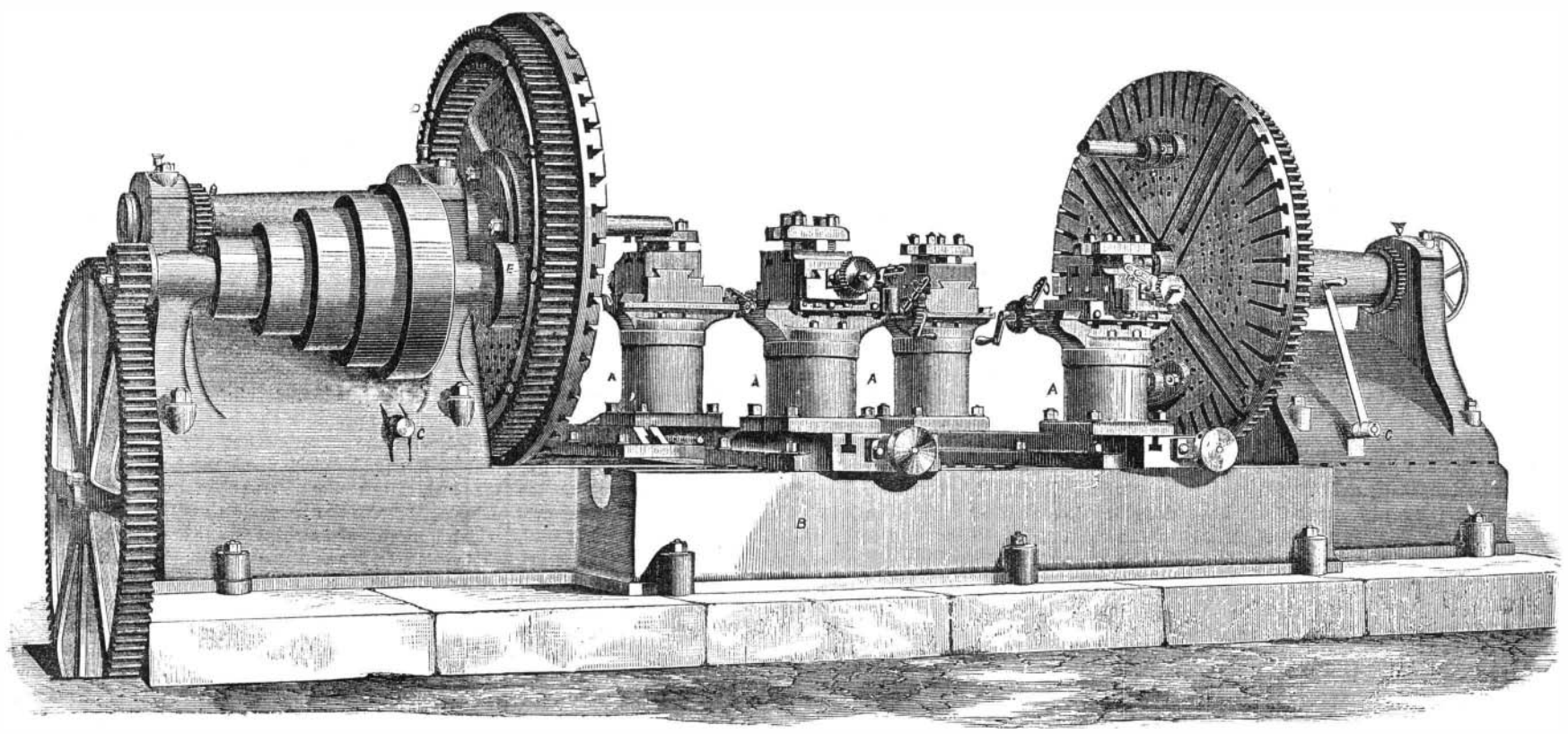
HANSON'S FLANGING MACHINE.

DUPLEX WHEEL LATHE.

We illustrate herewith a very fine duplex lathe recently constructed by Messrs. New, of Nottingham, for the Great Eastern Railway locomotive works, at Stratford, England. The lathe is arranged with four compound rests, A, constructed to turn a pair of 6 inch locomotive wheels on their axle, and for bossing and boring, as described below. The headstocks and rest saddles are fitted on a massive bed plate, B, 18 inches deep, and 23 feet long over all, with planed surfaces. The face plates are carried on cast iron spindles 15 inches diameter in the front neck, running in parallel bearings of cast iron, forming anti-friction working surfaces. They are driven by external wheels from a main shaft, 6 inches diameter, running the length of the bed, and supported by five bearings. On this shaft are two sliding pinions moved by levers, C C, to give independent motion to each plate for bossing and boring, and to work simultaneously in turning. The plate for the fast headstock is also provided with an internal wheel, D, for giving an independent quick speed by means of a pinion, E, carried on the cone shaft; the pinion on the main shaft being drawn out of gear by the lever, C, this gives the necessary fast running for bossing or boring a wheel on this face plate, while a tyre is being worked on at the other face plate, for which purpose the plates are arranged with slide seats to carry portable gripping jaws. The driving power is given by a 6 inch belt and a 5-speeded cone through powerful double gear.

The compound slide rests have each a double swivel arrangement to enable the cutters to be placed at any angle of flange or tread, and they have a double feed traverse of seven cuts to the inch worked by an overhead rocking shaft lever and chain—each pair of rests from their own headstock. To dispense with a crane, the dogs and bolts are arranged to be readily removed from the rests, so that the wheels may be run into the centers. Each saddle carries two rests, and it is recessed out in the center, so that each rest may be brought fairly opposite the tread of the wheel, and thus have full cutting power. For facility in working the saddles and tool pillars, they are each arranged to move by quick-thread screws, both longitudinally and transversely. The loose headstock shoot is worked by a hand wheel, and the headstock itself can be quickly traversed on the bed by a screw, so as to get adjustment of centers, if necessary, from 7 feet 3 inches to 10 feet.

This is a most complete modern tool for the purpose, being at once a special wheel-turning and general boring or bossing lathe, combined in the most simple and effective manner, so as to be readily used for whichever purpose is required. The lathe is a fine tool, and will maintain the reputation of the makers.—*The Engineer.*



NEW'S DUPLEX WHEEL LATHE.

A Hint on Healthy Dress.

Multitudes of persons of both sexes lose health, and oftentimes life, by busying themselves until warm and weary, and then throwing themselves on a bed or sofa, without covering, or in a room without a fire, or by removing their outer garments after a long walk. If you have to walk and ride both, do the riding first, and, on returning, go to a warm room, and keep on all your wraps until cool, even if you suffer some discomfort.

A Grasshopper Parasite.

There appears to be a chance that, after all, the grasshopper infliction will not be productive of such widespread devastation as has heretofore appeared probable. Messrs Dunkee and Stout, farmers of extensive tracts of land near Fort Scott, Kansas, according to a report in the *St. Louis Republican*, have examined by dissection large numbers of grasshoppers, and have found that about three quarters of them contained a well developed live maggot. As heaps of dead grasshoppers have been encountered, literally alive with the parasites, it is believed that the latter may ultimately cause an extinction of these most troublesome vegetable-destroying insects.