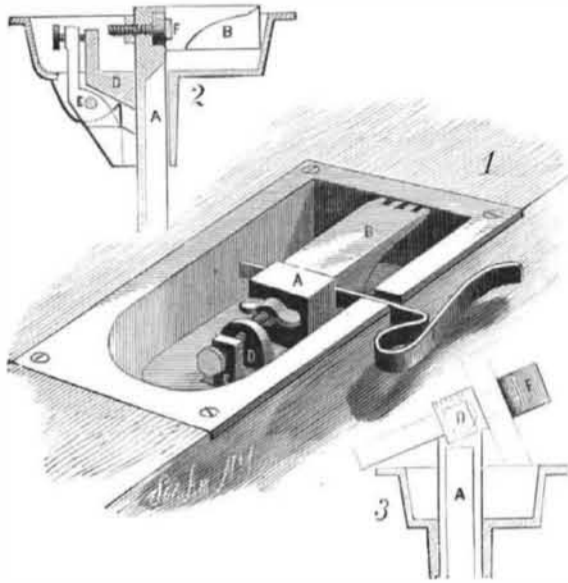


IMPROVED BENCH STOP.

In the annexed engraving, Fig. 1 is a perspective view, Fig. 2 a sectional side view, and Fig. 3 a cross sectional view of a bench stop lately patented by Mr. John Adams, of Walton, N. Y. The case is formed with top flanges, so that it may be let into and fastened flush with the top of the bench; and on the under side is a tube to receive and guide the post. The post, A, passes through the tube, and carries at its upper end the stop proper, B, which is of suitable form and attached to the post by a screw as shown in Fig. 2. The stop is made with a cross slot that receives the



ADAMS' IMPROVED BENCH STOP.

shank of a spring clamp, F, the end of which projects through a slot in the side of the case, so that the spring is held at the side of the bench for clamping the work. The spring may be set in or out for holding thin or thick material, and it is clamped to the post by a screw and nut. When not needed it may be put in from the opposite side, as in Fig. 3, or entirely removed. Upon the under side of the case are lugs to which is hung a clamp, E, whose lower end bears on the post, and upper end extends up through the bottom of the case. In the upper end is clamped a thumb-screw arranged so as to take a flange on the case and force the lever against the post, thereby holding the latter firmly at any elevation.

With this stop, work can be held upright or flat on the bench, or at any desired angle, so that the plane can be held level. The spring clamp can be used in place of a vise for holding boards. The parts are easily adjusted, both thumb-screws being convenient to use, and it is adapted for all wood working done on benches.

FOLDING TOP CRIB.

The accompanying engraving shows a child's crib recently patented by Mrs. Charlotte P. Allender, of Cuba, New York. To the corner posts of the crib, which are made with upward extensions connected at the ends by cross-bars, are attached the sides and ends in the ordinary way. To the rear posts and the rear halves of the top cross-bars are secured longitudinal bars. The forward parts of the top cross-bars and the front posts are provided with rack sections, which are hinged to each other and to the inner longitudinal bar, so that two or more sections can be turned back to give ac-



ALLENDER'S FOLDING TOP CRIB.

cess to the crib. To the lower corners of the one section are attached dowel pins that enter holes in blocks on the posts, to prevent the section from swinging outward. This section is fastened down by a hook or other suitable means. The crib is placed upon casters, and at one end is a handle. With this construction the crib—which the inventor terms the Excelsior Folding Top Crib—can be readily moved from place to place, and the child is prevented from climbing or falling out.

AXLE LUBRICATOR.

The barrel, or cylinder, A, serves as a reservoir for the oil to be fed to the bearing—for instance, the arm of an axle on which a vehicle runs, as indicated in the engraving. In the interior of the barrel is centrally held, by end bearings, a screw on which is placed the plunger, B, fitted liquid tight, so that none of the oil can escape behind it. One end bearing of the screw consists of a pin entering a recess in the end wall of the chamber, and the other end is journaled in a removable end cap. By turning the hand wheel, C, the piston may be moved toward the axle arm to force the oil through a channel to the axle. The cap permits the insertion of the piston and access to the latter for repair or removal at any time required. The barrel is filled with oil through an opening in the top closed by a suitable cap. The lubricator is secured to the axle by a clip, which may at the same time serve to fasten the tongue, hounds, or any other part of the running gear.

The lubricator being attached to the axle, the piston is moved back as far as it will go, when the oil is poured in. By reversing the motion of the screw, at any time required, some of the lubricant can be forced to the exterior of the axle arm. The channel enters near the top of the chamber, in order that no oil will flow therefrom except as it is forced out by the piston.

This invention has been patented by Mr. Henry Keller, of Corpus Christi, Texas.

Oiling the Waves.

Oiling the waves has recently been the subject of investigation and exhaustive report by Captain H. W. Chetwynd, R. N., Chief Inspector of Lifeboats, at the instance of the Royal National Lifeboat Institution of Great Britain. The *Telegraph*, London, reports the result as follows:

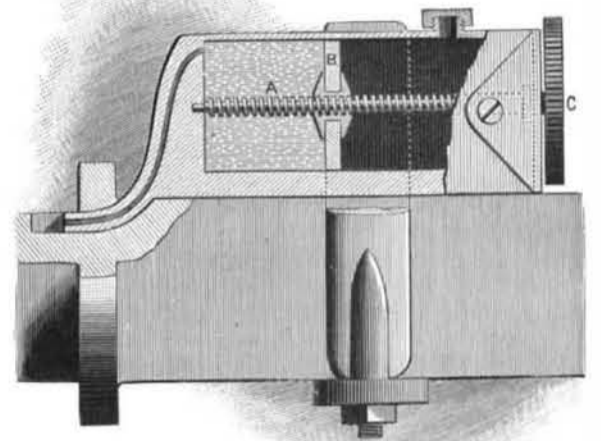
"Various conditions of the sea and all manner of oils were tested, and in reference to the latter Captain Chetwynd says they are all very much alike in their effect. Only very small quantities of oil indeed were necessary for covering a considerable distance with a smooth, glassy surface. The effects of this oily film in rollers that would endanger the safety of small open boats was most marked. It entirely stopped their breaking, leaving only the undulations or roll of a harmless swell, and thereby robbed them of their danger; but in surf of sufficient magnitude to be of importance to a lifeboat, or such as are ordinarily encountered by them, this effect was very much modified, and frequently entirely absent. On more than one occasion, in a moderate surf, which the oil was entirely 'killing,' if a larger breaker than the surrounding one rose the oil was powerless to check it, and the sea broke through it, covering boat, gear, etc., with oil. Its want of power to overcome the dangerous part of a heavy surf in shoal water (viz., the break) was clearly shown on more than one occasion, even when the oily film could be distinctly seen on the surface between the breakers. It seemed to fail in a very marked and curious way to have any effect on breakers caused by a heavy ground swell, and not by wind, on the coast of Cornwall. To be any protection, says Captain Chetwynd, it must be applied to the sea from the boat or vessel in the direct line from which the seas are advancing, and at sufficient distance to give it time to spread and act upon the waves before they reach the vessel to be protected. This could only be done in a lifeboat in two positions, viz., first, when anchored and lying head to sea and tide; and, secondly, when running dead before the sea for the shore. In any other position, even supposing the oil to be calming the sea, it would most probably be impossible to keep the boat within its influence, and proceed toward a wreck, or other desired point, at the same time. This difficulty would be considerably enhanced by the fact of the tide or current, on the greater part of the coast, setting with more or less velocity along shore. Under these circumstances, Captain Chetwynd is of opinion that no practical advantage can arise from the use of oil in the boats of the Institution, and he cannot, therefore, recommend its being supplied to them.

"With respect to its use as a protection to ordinary open boats in (to them) dangerous surf or breakers, the experiments appear to demonstrate clearly that, although it cannot be considered a 'specific' certain to insure immunity from danger in all cases, yet in many cases it would prove a very material protection, and go far to insure the boat passing safely through what would otherwise prove very dangerous, and possibly fatal, seas, and on that account alone its adoption cannot be too strongly urged for boats having or likely to have to encounter these dangers. As to the effect of oil in the open sea, Captain Chetwynd could not make personal experiments, but from well authenticated cases he believes that it is considerably more beneficial than off shore, and he strongly recommends vessels to carry oil, with perforated canvas bags for its distribution. The application of oil at harbor entrances is also, advantageous to a certain extent, but there remains many practical difficulties in the way."

"I CAN always tell the nationality of an engineer by the complaint he makes," said an old engine builder and repairer in one of our contemporaries. "The Scotchman is always worried about the 'bock losh,' Englishmen and Irishmen are always fighting 'the thump,' which they firmly believe was left there for them to remove; the German is very much concerned about 'dem walves;' while the Yankee has a hard time to 'keep her from chawin' too much steam.'"

IMPROVED ROAD VEHICLE.

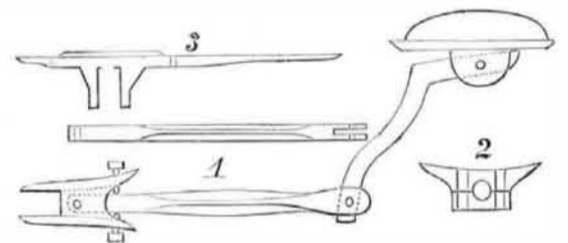
The shafts may be located directly on the axle, or they may be placed above and connected to it firmly by bent bars. For connecting the seat body to the axle independently of the shafts, a bolster is attached to the axle by means of boxes on which to place the springs, for the main support of the body directly under the seat which is balanced thereon. For the support of the body at its front end a clip is attached to the middle of the axle by a clamp which extends forward a suitable distance to connect with the rear slotted end of an arm, the connection being made by a pivot



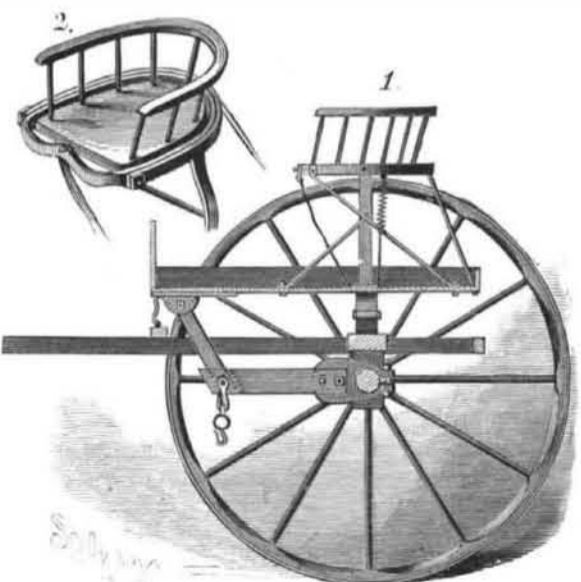
KELLER'S AXLE LUBRICATOR.

bolt and a second bolt that has a little vertical play in the clip plate. The arm extends forward not quite to the end of the body, and carries a support pivoted in a slot in its end; this support extends upward to the bottom of the body, and is pivoted between the ears of a socket. The upper end of the support is considerably widened to make points that serve for stops to limit the vibration of the body, caused by the play of the arm and also by the forward or backward movement of the body on the axle.

The center pivot bolt supports the clips to which the



whiffletree is connected. By this simple arrangement the body will not be subjected to any vibration by the shafts, and it will be greatly relieved of any vibrations of the axle. In order that the seat may be still further relieved, the frame of the seat is pivoted near its center to an outer frame connecting with supports; the frame has side springs just back of the pivots, which permit some vibration to counteract the effect of any vibration of the body. In front is a strap to adjust the seat to the convenience of the user. To avoid



AXFORD'S IMPROVED ROAD VEHICLE.

any side motion, and always insure a horizontal position for the seat, it is pivoted to the frame at the center of its front and rear edges; the frame is depressed in front for the thighs. Figs. 1, 2, and 3 (upper engraving) show the parts adjusted for a square axle; Fig. 1 being a plan and side view of the arm and attachment, Fig. 2 being the journal, and Fig. 3 the shaft clip.

This invention has been patented by Mr. Frederick J. H. Axford, of Cornwallis, Nova Scotia.