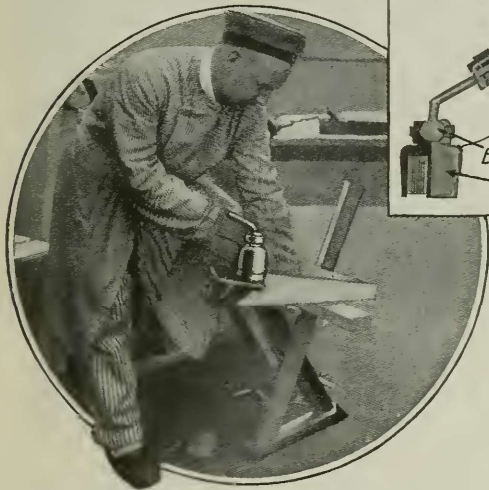


The Electromagnetic Hand for Armless Veterans

AT a meeting of the *Verband Deutscher Elektrotechniker* (Association of German Electrotechnicians) the suggestion was made that the *Verband* consider the design and development of artificial arms, equipped with electromagnetic seizing and holding mechanism. The underlying idea is simply this:

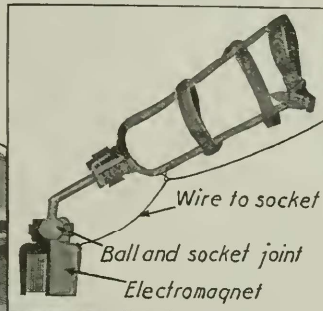


Construction of the electromagnetic hand. To the left, how the hand is used in sawing

The sleeve enclosing the stump of the arm is provided at its outer end with a pot-shaped or bell-shaped magnet, which can be adjusted or held in a ball-end socket, so as to bring the retaining face of the magnet to any position desired. The magnet may then be either clamped tight or else left movable against slight resistance. The pot-magnet is connected with a current supply by means of a screw-plug. Connection is made by moving some other part of the body, for example the foot, the chin, the remaining arm, the damaged arm itself, or even the whole body.

The pot-magnet makes it possible not only to grasp all iron objects, but also to

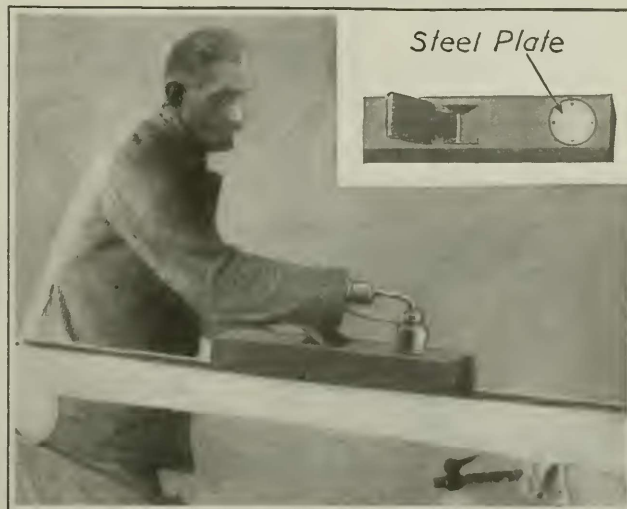
hold them tight or to lift them and move them for any length of time. During these manipulations the connection between the stump and the object (tool) is not a rigid, but a movable one. For this reason the magnetic hand may be used by all workmen who work with iron tools or iron articles. As a rule, the tool need not be specially altered or given a special shape for the mutilated man, since the magnetic hand is capable of grasping the tool at any place, provided it is made of iron.



In filing, for instance, the magnet is placed on the outer end of the file.

The file is moved exactly as if it were guided by a healthy arm; for the magnet can move relatively to the sleeve. A carpenter's plane is provided at its extremity with a small iron disk and is manipulated in exactly the same manner as any other plane. Stampings cut out by machine dies can be removed perhaps with greater ease than with a normal hand.

Still other grasping movements, for instance a pinching movement, may be carried out without difficulty. Even the delicate closing movement of a pair of pliers may be effected.



The plane must have a piece of steel on its upper face so that the electromagnetic hand may have a hold