

own or use them. Another advantage of the system is one that will be greatly felt in the hunting field. The hoof, having its natural form and surface preserved, draws out of clay or mud without the suction by which so many ordinary shoes are loosened, and so much extra labour is entailed upon the horse. It has been calculated that this suction may be nearly 11lb. per lift to each foot, in addition to the weight of the shoe; and its total amount at the end of a day's work would be such as to seem scarcely credible.

We have yet to speak of the manner in which the Goodenough shoe is produced, and this to many persons will not be the least interesting portion of the subject. It is manifest that a shoe with a perfectly true and level surface, and of a regular pattern, can only be made economically by machinery. Accordingly, machinery has all along been employed in America, and Messrs. Robinson and Cottam, the engineers, of Cannon-street and Battersea, who have undertaken to make the shoes for this country, found it necessary to follow the American example. Mr. Cottam, however, designed original machines of his own, and a plant consisting of five parts will be able to turn out 8,000 pairs of shoes in a week. Iron is sent from the North in long straight bars, rolled to the general outline of the shoe, with the interrupted margin for the calks, and the hollows for the nail heads. These bars contain, in width, the material for two shoes. The first machine cuts the bars into lengths; the second punches the nail-holes at the proper degree of obliquity, so that the nails cannot be driven into any sensitive part of the foot, the third splits the lengths so as to separate each into the two shoes that it is intended to form. The separate portions are then heated, bent round a kind of mould to the proper shape, and, lastly, pressed to the required level. The size of the shoe is determined by the length of the bar, the shape by that of the mould around which it is bent. In the bending machine this mould can be changed at pleasure, and Messrs. Robinson and Cottam will eventually have a sufficient number of moulds to enable them to fit any hoof. At present they have only the more common sizes and forms, and hence it is sometimes necessary to alter the shape of a shoe upon the anvil. But the ultimate result will be that the factory at Battersea will become a gigantic ready-made shoe shop for horses, and that any horse will be fitted there by sending a cast or tracing of the outlines of his hoofs. Gentlemen will then be able to keep a stock of shoes for their horses at their own stables, and to have them put on there by the farrier, who will need no forge. The work of the farrier will indeed, be so much simplified that in large stables it will probably be desirable to have a groom instructed, and to make the renewal of the shoes a portion of the ordinary routine of the establishment.—*London Times.*