

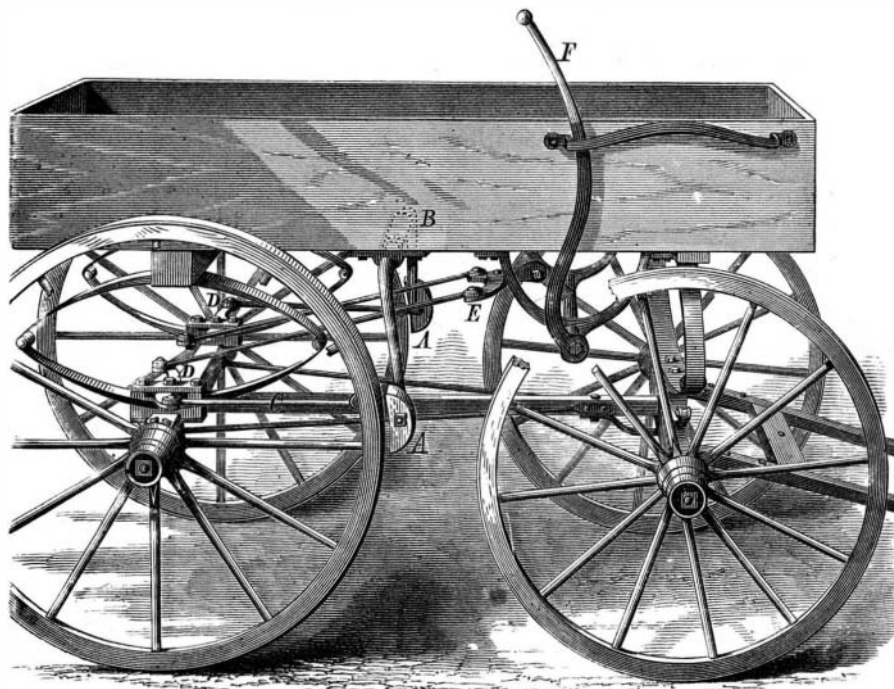
**IMPROVED WAGON BRAKE.**

The improved wagon brake, illustrated herewith, while strongly constructed, is so contrived as to prevent any racking effect upon the under portions of the wagon. Its arrangement is also such as to render its pressure equal on every wheel to which it is applied, even if said wheels be of different diameters, thus comprising one of the best inventions of its kind that has come to our knowledge.

The brake shoes, A, are suspended in front of the hind wheels by arms of shafts, the inner ends of the latter being secured in a sleeve, B (dotted lines), underneath the wagon. The shafts not being connected together, and working independently in the sleeve, B, it follows that either brake shoe may be pushed against its wheel without causing a like movement of the opposite shoe. To each shoe is attached a rod, C, which is attached to pivoted lever, D, and these last by rods to the evener, E. The levers, B, it will be observed, are pivoted to the rear axle, so that the direction of the forces, imparted by them to the axle and by the shoes to the wheels, will oppose and neutralize each other through the wheels and the axles.

The evener, E, is pivoted to the end of a rod which is connected to an arm of an oscillating shaft suspended from the bolster or front part of the wagon box, and provided with a hand lever, F, for operating the mechanism. The arrangement throughout is quite simple, and is doubtless efficient in operation.

Patented through the Scientific American Patent Agency, June 25, 1875. For further particulars address C. M. Howell, Andover, N. J.



**HOWELL'S WAGON BRAKE.**

**IMPROVED DRAWING PRESS.**

In the annexed illustration is represented a new drawing press for the manufacture of hollow metal ware. It possesses great power and is solidly and durably constructed, though occupying but small space and weighing but little. In making articles of moderate size, it cuts the metal into proper shape before forcing it into the die, accomplishing this operation by new and ingenious mechanism, detailed reference to which is made below. It is also provided with novel means for accurate adjustment and a new device for self-adaptation of the drawing parts to metal of varying thickness. In Fig. 1 is given a perspective view of the apparatus. Figs. 2 and 3 are sections of the dies and punches. From the first engraving it will be seen that power is communicated to a large pulley which, by means of a simple clutch, operated by the treadle shown under the bed, is thrown into or out of gear at will. From this pulley, by the interposition of suitable mechanism, power is transmitted to a horizontal shaft passing through the lower portion of the frame, on which shaft is a heavy cam, A, and also two cranks, B. The cam, in its revolution, acts upon a roll above it, and so elevates the carrier C, of the cutting and drawing dies, which travels in slides in the frame. To the cranks are connected pitmen, D D, which connect with a wrought iron yoke, to which is secured the drawing punch rod, E. At F is a cross connection between the two sides of the frame, to which connection is attached the cutting punch.

When the cam shaft is rotated, the cam, as above stated, raises the die carrier; and the cranks, pulling down the pitmen, force the cutting punch against the metal and into the die below. This will be more clearly understood from the section, Fig. 2, in which G is the drawing die, H the cutting die, I the cutting punch (stationary), and J the drawing punch. As the die carrier rises, the metal is first pressed against the cutting punch, I, between the outer edge of which and the cutting die, H, it is quickly cut, and the punch, I, entering the die, then holds the edges so cut out very firmly, as in a vise. At this point the drawing punch, J, comes down and forces the metal into the drawing die, G, thus completing the operation.

It sometimes happens that the metal is not of uniform thickness, in which case it may be easily imagined that, through the lack of a close hold between the cutting punch and die, a portion of the edge would be forced down into the drawing die on the descent of the punch. To obviate this, the lower portion of the drawing die is made hemispherical, and it sets in a corresponding socket in the bed so as to form a ball and socket joint, which of course adapts itself to the thickness of the metal pressed above it. This is a very ingenious and novel arrangement, and one which insures the tight grip of the edge of the metal without chance either of its wrinkling or of its escape. Fig. 2 shows more especially the device used for small ware, such as cups, etc., for larger articles, pans and like objects, a different arrangement is employed, which is exhibited in Fig. 3.

In this there is no cutting of the metal by the machine, that operation having to be performed previously, and hence there is neither cutting die nor punch. The drawing die is

a simple concavity, without peculiar features, the essential points of the device being found in another means of holding the edge of the blank. The punch, K, passes directly through the ball portion, L, which is confined by a ring, M, held by the screw bolts, one of which is shown on the left. The edges of the blank are compressed and held between the

devices for adjusting both slides. By these the latter, as necessarily is required from the relation of punch and die, can be adjusted with the greatest nicety. The instrument shown in the foreground is used for manipulating the eccentrics. It may also be noted that the heaviest strain comes on the wrought iron pitmen and yoke and the steel shaft, thus relieving the cast frame and allowing of the use of less metal therein. The shape of the lower cam, which is such as to hold the lower slide stationary after the punch has cut and until the drawing punch descends, is a neat piece of mechanical construction worth noting, and attention may also be called to the bowing out of the frame at the points where the drawing takes place, thus giving to the former the very slight spring which it requires, and at the same time affording a wider space where the same is needed. We have seen the machine operate, and examined samples of its products. The latter were well made. The reader will find the press itself in motion at the American Institute Fair. For further information address the manufacturers, The Stiles & Parker Press Company (N. C. Stiles, agent), Middletown, Conn.

**Crape.**

The article of chief value in the production of crape is the finest Italian silk, prepared, spun, and woven in a peculiar manner. Some of the processes are held in secrecy. Crape is sometimes made of cotton, and passes under the names of "Albert" and "Victoria," for such uses as do not require the more expensive article.

The use of this emblem of woe is so on the increase that many stricken ones indicate their grief by dense folds of crape, that seemingly envelope them in clouds of inconsolable sorrow.

**National Differences as to Whistling.**

One of our English contemporaries, in a lengthy article concerning the whistler, winds up as follows:

"Considering the vast annoyance caused to men and women by the prevalent vice of whistling, we may well ponder on the question: Why do men whistle? Women do not, although we could well tolerate anything from their lips but determined refusals. What impulse leads a man to enclose a circular space with his lips, and then by sheer pneumatic force to make the noise called whistling? If the lips looked more elegant in this form, there would be a plea for whistling. But this is very rarely the case. Granted a moderate-sized mouth, with upper lip rather small, the personal appearance of the whistler may be tolerated. But take a big mouth and a pent roof under lip, and the whistler presents to you a facsimile of the extremity of an elephant's trunk. Strange to say the latter class of whistlers are by far the more prevalent; and if whistling be a fine art, and not one of the ills that flesh is heir to, the big-mouthed are the most efficient though the most persevering performers. We could read with greater comfort and interest between two large saws that were being sharpened than near an inveterate whistler."

Just after reading the above, we were looking over a pile of American exchanges, when we came across the following in one of our agricultural newspapers:

"An old farmer once said that he would not have a hired man on his farm who did not habitually whistle. He always hired whistlers; said he never knew a whistling laborer to find fault with his food, his bed, or complain of any little extra work he was asked to perform. Such a man was generally kind to children and animals in his care. He would whistle a chilled lamb into warmth and life, and would bring his hat full of eggs from the barn without breaking one of them. He found such a man more careful about closing gates, putting up bars, and seeing that the nuts on his plow were all properly tightened before he took it into the field. He never knew a whistling hired man to kick or beat a cow, nor drive her on a run into a stable. He had noticed that the sheep he fed in the yard and shed gathered around him as he whistled, without fear. He never had employed a whistler who was not thoughtful and economical."

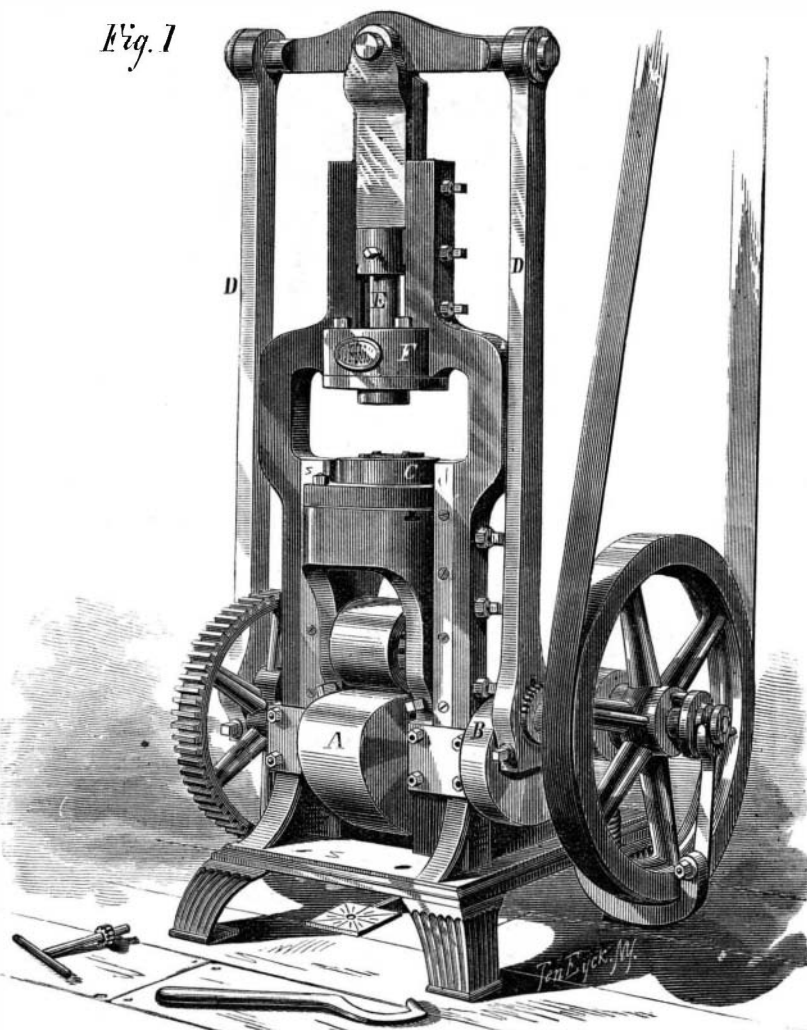
This leads us to ponder and wonder if the foreign whistler is less an artist than the American, or if the difference in opinion between the English and the home writer is owing to their individual tastes. There seems to be a principle involved. Which shall be accepted, the opinion of the foreign or the American editor? It seems to be of national consequence to have the matter decided.

In referring to the new carbonic acid motor recently patented by Mr. John Westcott (see page 266, current volume), the types made us state that the absorption of charcoal is equal to five times its volume of gas. The absorption is fully thirty-five times the volume, and the sentence should so read.

surface of the die and a lower ring, N, which is upheld by another set of screw bolts, one of which is shown on the right. These bolts pass through a large bore in the ball portion, L, thus allowing the latter its free play and shoulder in said ball, as shown, so that the latter and the ring are closely united. The ring, N, therefore, follows the play of the spherical portion, and consequently automatically adapts itself to the thickness of the metal. The punch then descends in manner similar to that already described.

Referring again to Fig. 1, at the crank pins of the pitmen, and also on the lower roll actuated by the cam, are eccentric

Fig. 1



**STILES AND PARKER'S DRAWING PRESS.**

Fig. 2

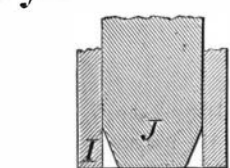


Fig. 3

