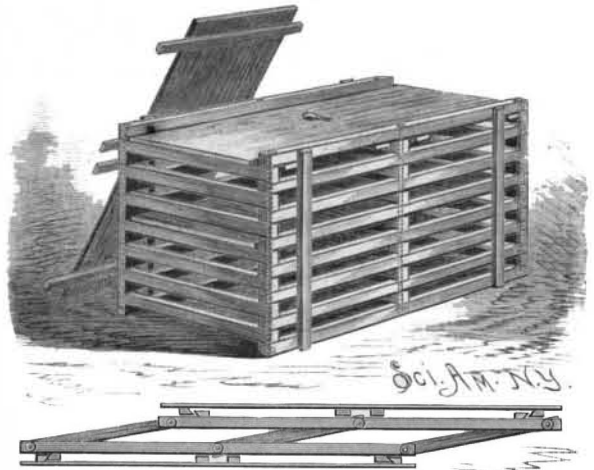


**A CRATE FOR SHIPPING FRUITS, VEGETABLES, ETC.**

The illustration herewith shows a method of making a crate for the transportation of fruit, vegetables, etc., in such manner that, after use for the purpose for which it is designed, it may be taken down and folded up to occupy the least possible space, to be returned to the original shipper. The crate is composed of side and end bars, which meet at the four angles, where they are overlapped, and held in place by a long rod, which passes through the ends of the bars, being formed at one end with a head, and passing through a plate at the other, above which plate the rod is flattened out by riveting, so that displacement will be prevented. Upon either



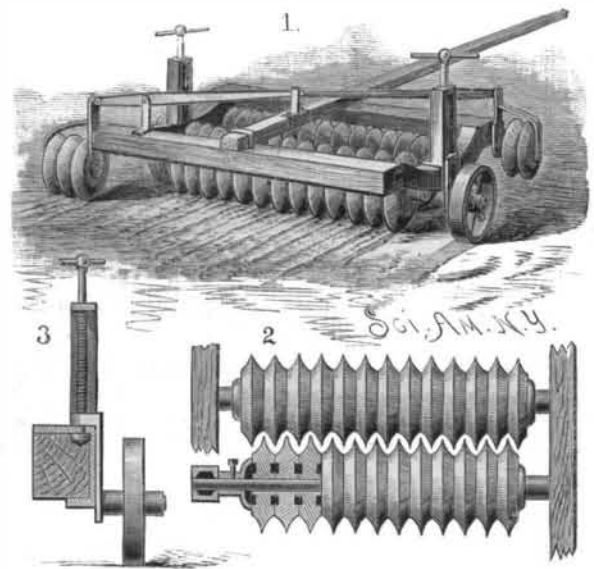
COLVILLE'S RETURN CRATE.

end of each set of side bars there are cleats which serve as braces and as retaining cleats for the bottom and cover of the crate. In the longitudinal center of the crate there is also a partition formed by bars inserted and held in place by rods after the same manner as the crate is otherwise held together by the rods at the corners. In the illustration, one of the views is in perspective, showing the crate set up, while beneath is a representation of one of the sections as it appears when unpacked, to be folded for return to the shipper.

This invention has been patented by Mr. John Colville, of Brunswick, Ga.

**TWICK'S COMBINED LAND ROLLER AND CLOD CRUSHER.**

An improved land roller for breaking the lumps and clods of earth in a newly plowed field has recently been patented by Mr. Friedrich Twick, of Sheboygan, Wis. A rectangular frame, as shown in the perspective view of the machine, is attached to an ordinary draught pole, and has two parallel shafts journaled in its side pieces. A series of cutter disks, or colters, having sharp cutting edges separated by curved annular grooves, is mounted on each transverse shaft in such a manner that the cutting disks on one shaft pass into the grooves on the other, as shown in Fig. 2. Suitable washers are interposed between the end disks and the sides of the frame. Screw spindles with cross pieces or handles on their upper ends are mounted in standards projecting upward from the central portion of the side pieces of the frame, one on each side of the machine. These



TWICK'S COMBINED LAND ROLLER AND CLOD CRUSHER.

spindles pass through nuts formed as arms on the upper ends of side plates carrying the road wheels. Fig. 3 represents the details of this construction. Consequently, by turning the spindles, the frame can be raised or lowered in relation to the wheels, and the cutter disks lifted entirely above the ground, when going to and from the field, or adjusted to penetrate more or less deeply when the machine is in operation. The disks may, if desired, be placed at unequal distances above the ground on the two

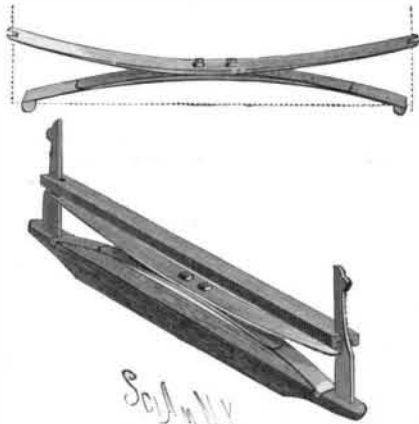
sides of the frame. Additional disks in sets of two or three are shown at the front and rear of the machine. These are mounted on small shafts journaled in sliding frames which are connected with the main frame at diagonally opposite corners. These sliding frames are raised or depressed by means of levers capable of being locked in place by a spring catch on the draught pole. The action of the machine is to crush the lumps and clods, and at the same time cut them in pieces and pulverize the earth.

**Cattle Bones.**

The four feet of an ordinary ox will make a pint of neat's foot oil. Not a bone of any animal is thrown away. Many cattle's shin bones are shipped to England for the making of knife handles, where they bring \$40 per ton. The thigh bones are the most valuable, being worth \$50 per ton for cutting into tooth-brush handles. The fore-leg bones are worth \$30 per ton and are made into collar buttons, parasol handles, and jewelry, though sheeps' legs are the staple parasol handles. The water in which the bones are boiled is reduced to glue, and the dust which comes from sawing the bones is fed to cattle and poultry.

**A SPRING FOR LUMBER WAGONS.**

A spring which is designed to have an easy movement with either light or heavy loads, and which can be readily placed on or removed from the vehicle, is shown in the accompanying illustration. It is composed of two convex members centrally united at their backs, each member being re-enforced with one, two, or more additional plates, as may be desired. The ends of the upper member of the spring have recesses which fit over the stakes of the bolster, thereby preventing any sidewise movement of the spring, but allowing a lengthwise expansion, while the ends of the lower member of the spring have downwardly extending lugs, which ride on the upper edge of the bolster, and thus hold the spring in place. As the spring is not permanently fastened to the bolster, it can be easily and quickly removed from the vehicle.



EDELMANN'S VEHICLE SPRING.

This invention has been patented by Mr. Adam Edelmann, of Germantown, N. Y., and application for further particulars in reference thereto should be addressed to Mr. A. Weck, East Camp, Columbia County, N. Y.

**Gold and Silver in the Arts.**

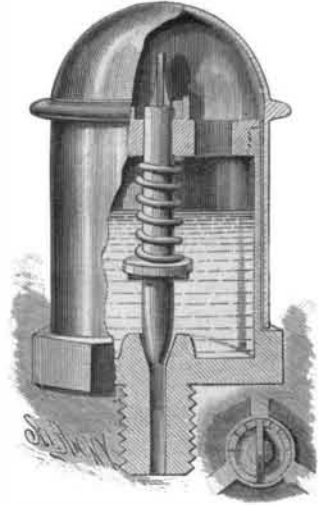
From a table recently prepared by the Director of the Mint, it appears that during the calendar year 1883 a total of \$14,459,464 worth of gold was utilized in the arts and manufactures of the United States. Of this amount, \$7,905,163 was used in jewelry and watches; \$3,598,308 for watch cases; \$1,084,824 in gold leaf; \$827,000 for watch chains; and the remainder in smaller sums for dental supplies, pens, instruments, plate, spectacles, chemicals, and jewelers' supplies. During the same period, a total of \$5,556,530 worth of silver was utilized for similar purposes. Of this amount, \$2,066,294 was used for plate; \$1,815,599 for watch cases; \$1,098,220 for jewelry and watches; and the remainder was divided among the other uses specified for gold. The table is of considerable importance, for by giving the amount of gold and silver annually utilized in the arts, it permits an approximate estimate of the available metallic currency of the country.

**The English "Parcels Post."**

The *Railway News* gives the new arrangements for the parcels post, which are to take effect May 1. The present maximum weight is seven pounds, which is to be increased to eleven pounds. The charges will be 3d. for the first pound and 1½d. for each pound or portion of a pound after the first, so that the charge for eleven pounds would be 16d., or 36 cents. There is also a provision for insurance up to a value of £10, at an additional charge of 2d. Postal arrangements of this kind here would tend to diminish the value of express stocks.

**AN ADJUSTABLE AUTOMATIC OIL CUP.**

The discharge aperture in the bottom of the oil cup shown in the accompanying illustration is fitted with an adjustable valve and novel means for holding the valve in any position in which it may be placed. The cup has a threaded nipple for attachment to the guides of a locomotive or other mechanism with which it is to be used, and at the top of the opening of the nipple is formed a valve seat, the valve stem extending upward through a spider in the top of the cup. On this spider, and concentric with the stem of the valve, is formed an annular rim, on the upper edge of which



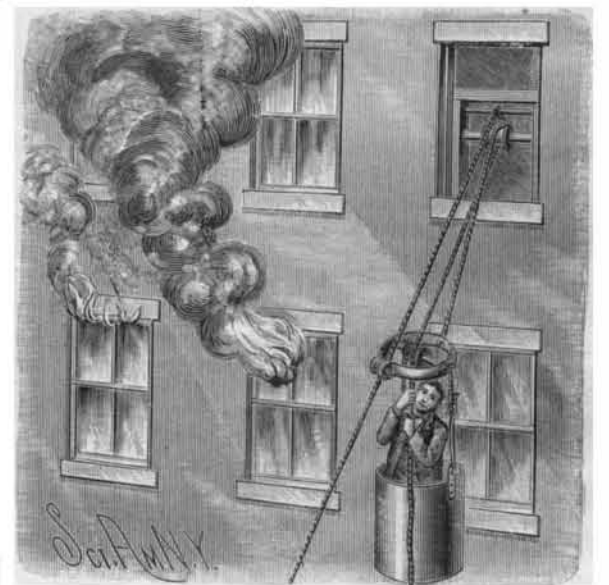
MAHAN &amp; ROSSETTER'S OIL CUP.

are two inclined surfaces or cams, shown more in detail in the smaller view. The top of the valve spindle has a crossbar whose lower edge is V-shaped and rests upon the inclined cams; when the crossbar is above the lower ends of the inclined cams, the valve will be on its seat, and when the crossbar is turned to cause it to ride upward, the valve will be raised, allowing the escape of oil. Notches are formed in one of the cams to hold the crossbar in such position as it may be desired to set the valve, and a spiral spring on the valve spindle holds it in place.

This invention has been patented by Messrs. William A. Mahan and Charles Rossetter, of Marquette, Mich.

**A SIMPLE FIRE ESCAPE.**

The device herewith illustrated, besides being a simple one for use by individual householders, is intended also as a convenient appliance for the service of fire departments, in connection with hook and ladder companies, to facilitate the releasing of occupants from the upper floors of burning buildings. The fire escape proper consists of a car or basket, suspended from a ring which has a rope attached to it, by which the basket is raised and lowered, the rope passing over a roller or pulley on a shaft held in the window frame; or, otherwise, the pulley over which the rope passes may be suspended by a suitable hook made fast within a window frame or other opening of an upper story. There is, in addition, a guide rope, made fast at the window, and passing through lugs at the outer edge of the ring from which the basket is suspended, to be anchored at the other end at a suitable distance from the



ILSE'S FIRE ESCAPE.

building. This escape can be operated by a person in the basket to reach or lower away from an upper story, or by one on the ground, the basket being raised and lowered as slowly or as quickly as desired.

This invention has been patented by Mr. Augustus Ilse, of Evanston, Wyoming Territory.

To remove candle grease from furniture without injuring the varnish, rub it off with a little warm water and a rag.