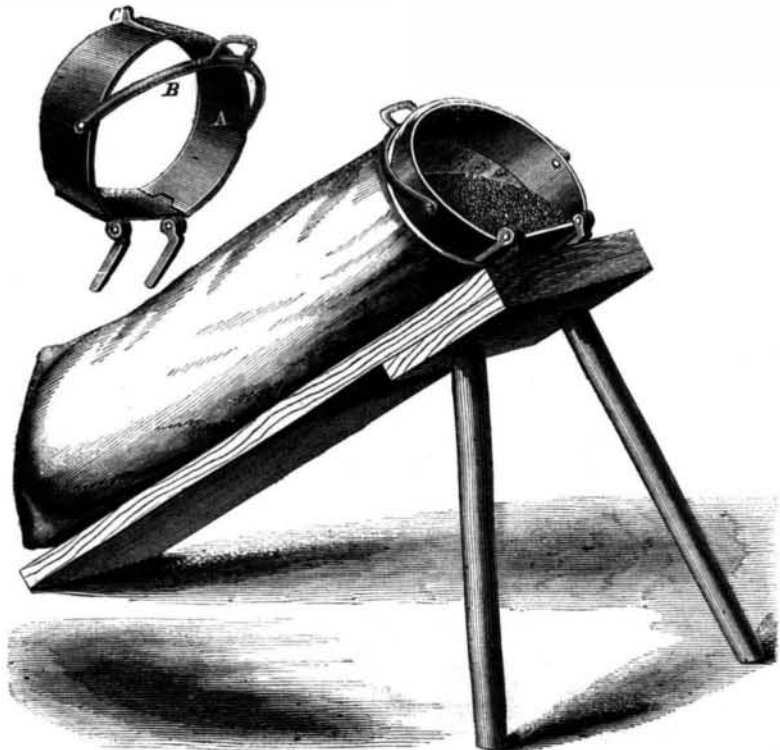


**Improved Bag-holder.**

The process of filling grain-bags by the usual old-fashioned method is very tedious and wasteful, for unless great care is taken and time expended, much of the grain is spilled on the floor. The little apparatus illustrated herewith is a very great aid in performing this labor, as by its use the operator is enabled to fill many more bags than by the ordinary method. In these times when labor is scarce and expensive anything that tends to cheapen it will be welcome. The apparatus consists of a light iron band, A, to which is attached the bale, B, there are also hinges at one side which have spurs that connect to brackets, or other suitable fixtures, on the bench. The operation of it is very simple; the bag to be filled is merely slipped over the band and the bale pushed down on the catch, C, over which one side of



**GODFREY'S BAG-HOLDER.**

the bag has been drawn, as shown in the principal figure; this keeps the mouth of the bag wide open, so that the grain may be shoveled in rapidly without waste or loss of time. These bag fillers can be attached to any size or length of bag without injury to the fabric, and may be quickly removed and made ready for work on others. Rights to manufacture and sell this useful apparatus may be had by addressing the inventor, F. Godfrey, at Grand Rapids, Mich., by whom it was patented April 12th, 1864, through the Scientific American Patent Agency.

**TEMPERATURES AT WHICH METALS BOIL.**—These have been hitherto determined by means of an air pyrometer, but M. Becquerel has adopted another method for their determination. The instrument he employs is a thermo-electric pile, and with it he found that the following metals boil at the following degrees Fahrenheit:—cadmium 1,328; zinc 1,688; silver 1,681; gold 1,879; palladium 2,517; platinum 2,690. It is of some importance to state that certain of these figures are lower than those obtained by M. Becquerel, when using the air pyrometer.

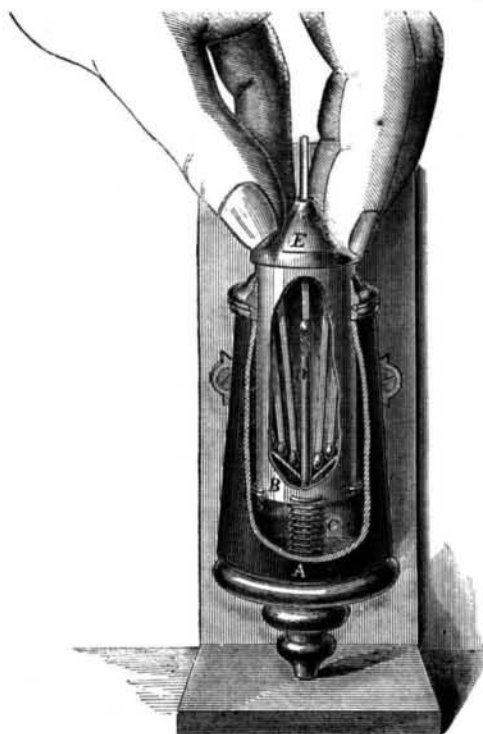
**SPECTRAL CHARACTERS OF INDIUM.**—Messrs. Reich and Richter, the discoverers of this new metal, state that its presence is indicated in the spectroscopy by two blue lines, one of which, the brighter, corresponds to division 98 of the scale, and the other to 135. In some cases this mode of analysis becomes unnecessary, as the instant the indium salt is placed in the flame of the Bunsen lamp, it communicates to it a bright violet tinge which they consider to be sufficiently characteristic.

**SUMAC** (*Rhus Glabrum*) has a large quantity of tannic acid in its leaves and bark, and is consequently useful in tanning leather,

**SNOW'S MATCH-SAFE.**

Since the introduction of friction matches it has been found necessary to provide some means of keeping them safe and convenient for use; but most receptacles which have been made for them heretofore, have not fulfilled all the requirements of a good match-box. Most persons have had experience in hunting after matches in the dark, and know how objectionable it is for many reasons. The box illustrated herewith is so arranged that but one match can be withdrawn at once; the contents of the box are also preserved from dampness or accidental ignition, and from being scattered about if it is overturned; children cannot get at the matches and poison themselves by sucking the ends, or perpetrate other mischief that has occurred from careless exposure of these combustible. These features are novel and useful as

every one will acknowledge. The engraving shows part of the case, A, broken out. This case is of wood and has a brass cylinder, B, inside, at the bot-



tom of which there is a spiral spring, C, and a rod, D. The matches are put in the cylinder, which has a concave bottom, so that the matches tend to fall to the center over the rod; this latter is fixed, and when the fingers are pressed on it, as shown in the engraving, the rod forces a match up through a hole in the

loose cover, E, so that it can be seized by the fingers and withdrawn for use. This convenient and ingenious match-safe works very well, and is one of the best we have seen. It was patented by George H. Snow, of New Haven, Conn., through the Scientific American Patent Agency, on April 19th, 1864; for further information address the inventor as above.

**SCRIPTURAL MENTION OF FLINT WEAPONS.**—The Rev. G. N. Smith mentions in a letter to Mr. Mackie, in *The Geologist*, that there occurs in the Septuagint, a passage in Joshua which relates to the burial of certain flint implements. He indicates the possibility of explaining the presence of these weapons in tumuli, by reference to the Old Testament evidence, which is as follows (Joshua xxiv. 30)—“And they buried Joshua in the border of his inheritance, and they placed with him, in his tomb, the flint knives with which he had circumcised the children of Israel; and there they are unto this day.”

**CHARGES OF compressed tobacco** are now put up by a patent process in a compact and portable form for smoking in pipes.

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