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Improvement in Planing and To
Grooving Machines．
Mesers．Rufus and C．S．Bixby，and John Garst，of Dayton，Ohio，have taken measure to secure a patent for improvements in planing and stationary tongueing and grooving cutters The planing knives are stationary；a set of section roughing planes，are set transverely to the motion of the boards，to cut off small por－ tions of the rough surface at once，and then the whole face is finished by a single smooth ing plane set behind those which operate upon the rough surface．Each plane，therefore，is made to perform but a small part of the ope ration，and thus far ease of working the pla ning action is spread over，it may be said，a wide surface．The tongueing and grooving is performed by atationary gouges set in the fra：ne behind the planes，so as to take into the edges of the board and match them after the planing operation．The principal new fea ture in this does not relate to the cutters but to a fine revolving chain belt on each side un－ der the gouges，which，by its continual re volving，keep the cutters clear of chips．This is a very important improvement．

## Pendulum Ship Ventilators

Mr．John Hirst，of Brushville，Long Island， has taken measures to secure a patent for a mode of ventilating veasels by a pendulum mo－ tion，derived from the motion of the vessel，to work a set of bellows，which takes in pure air by a tube from above and expel it by another pipe，leadingfrom an under passage of the bel－ lows below．To give the bellows a quick ope rating action，a pendulum rod with a heavy weight at its lower end，is secired to the movable cover of the bellows．This weighted rod，is kept by guides from flying too far out， and the weight，whenever it passes the vertical line of the centre of gravity has a quick motion to the side，thus opening the bellows to drax down good air from the top， by one roll of the vessel，and then swinging quickly to the other side，at the contrary roll of the vessel，to expel the air and send it fresh through the vessel．This aame plan can act to expel foul air in the aame way．The power derived is an inexpensive one，namely，the natural motion of the vessel．Valves are constructed in the bellows and pipes，to work upon the principle mentioned．The supply of air can be shut off by a valve，if there is too much forced through the vessel．

Improvement in Carriages．
Mr．James C．Spencer，of Geneva，N．Y． has invented an improvement in carriages，for which he has taken measures to secure a pa tent，that must ultimately come to be very ge－ nerally adopted，as light carriages can be con－ structed by adopting his method，at much less expense than by any other plan with which we are acquainted．No reaches are used；the body of the carriages is jointed at the middle， and has an eliptical spring just above the joint．Strong curved aprings，secured to the body of the carriage and supporting the same， are secured directly to the axles，in such a way that a turning axis bolt unites the front part of the carriage body，and a like one the back part to the axles，thereby allowing the front and back wheels to turn in a very small compass without any intervening reach under the seat of the carriage．The jointing of the carriage body and the eliptical spring under the same，gives the body of the carriage an easy accommodating motion when the wheels are passing over uneven roads．No bol sters，\＆c．，are employed．

## Improved Printing Presa

George Bruce，Esq．，of this city，has offered a premium of $\$ 1,000$ to the first inventor who shall construct and submit for judgement a Press which will throw off 500 large Imperial sheets per hour and can be sold for $\$ 500$ ．A Committee of competent persons will in due season be chosen to examine competing Press es and mate the award．The Patent－Right of the successful Press will be the sole proper－ ty of the inventor，and ought to insure him a伿

## IMPROVEMENT IN RIFLES

This is an improvement inRifles，combining $\mid$ ton．The engraving is a side view，with the Sharp＇s Patent Loading Breech，and Dr．May－priming box open；no caps are used；the pri－ nard＇s Patent Self－Priming Rifles．In No． 25 ming is a patent preparation of percussion pa of our last volume we published an illustra－per made into a coiled ribbon，represented by ed description of Sharp＇s Riffe，and we would D，and placed in the inside of a small box refer our readers to that for an explanation of which is now represented as being open．F the manner by which this rifle is loaded a the breech．
The accompanying engraving only illua ates the improved mode of priming，whic is tha invention of Dr．Maynard，of Washing．passes over the top of the nipple．It will als

he hammer，$A$ ；this cuts off the strip of rib bon as the hammer is coming down on the nipple，and when the hammer strikes the pre pared paper，it being percussive，the powle is ignited，and the gun discharged．The ques－ tion may now be asked，＂how is the paper fed over the nipple for a new priming，after having been cut off by the hammer ？＂This is done by a small flat ateel spring，B，secured on the periphery of the ring of the hammer joint When the hammer is drawn tack，it will be observed that the flat spring，$B$ ，is moved for ward，pushing the priming strip over the ori fice of the nipple for the next discharge When the hammer， A, falle down on the nip ple，itwill beobserved，the spring，$B$ ，is drawn back for a new feed of the paper．This would draw back some of the paper，were it not for another amall stationary flat spring，C，which

For the Scientific American．
Improvement in Weaving Looms


On February 4th，1851，letters patent wer granted to Enoch Burt，of Manchester，Conn． for improvement in fancy check power looms， of wich the following is his claim ：－
First，he claims the connecting a series of huttle boxes，by joints，at their lower cor－ ners，or attaching them to a flat jointed chain and connecting their extremities so as to form an endless chain of boxes，and bringing them into a parallelogramic figure by means of two square heads of a size to fit the
space between the joints of the boxes or the
hulds the paper so as to allow it to be fed only up and along the metal incline to cover the nipple．This is the most ingenious，simple and effective method of priming firearms eve discovered．Albert S．Nippes \＆Co．have the exclusive right to apply Dr．Maynard＇s Pri ner to Sharp＇s Rifie，with the exception of the U．S．Government privilege to the sarae．l＇hese fies，thus improved，are manufactured and sold by Butterfield \＆Nippes，Kensington， Philadelphia．Capt．Tansil，of the U．S．Ma rine Corps，and a board of Ordnance officere ave reported in favor of the warlike instru ment．A ball was fired by it along the sur face of the Potomac，and it was loaded and fired again so quick that the two balls were seen akipping along the surface of the water t one time，a good evidence of the apee whereby it can be loaded．
chain，and hung on journals，one on the chain，and hung on journals，one on the sword of the lay，substantially as heretofore described．

Second，The combination of the irregula worm，the two sets of double rectangular le vers，the connecting bars，and the vertical notched levers on which the bars operate，the pin－band and knees，and the wires connecting the knees and vertical notched levers，through which the notched are moved forward and backward，to embrace the bara，giving them and the heddles an upward and downward movement in any irregular manner desired substantially as described in the specification constituting a new and advantageous modu operandi of forming variegated sheds．
The improvement in shuttle boxes，here claimed，is illustrated by the following，which is an end view of the boxes and a part of the loom；$D$ is a section of the loom frame，$E$ is the sword of the lay；$F$ is the top of the breast－beam；A A is the chain of the shuttle boxes； 00 are the journals of the two square heads，over which the chain of boxes is stretch ed in an oblong or parallelogramic shape；B is a wheel on the end of the lower square；$C$ is a wheel double the size of the preceding and taking into it，having on ita face eight pins－ the moving of this wheel the distance of on pin carries the wheel，B，and the square head to which it is attached，one quarter around and consequently shifts a shuttle．The run ning shuttle is on the top，level with the top of the race－beam．The pins in the wheel are acted upon by two levers，which are brought into contact with the pins，on one side or the other，as the figure wheel directa，thus shifting the chain forward or backward one shuttle $G$ is the end of the picker rod，in the hanger， which supports the outer end of the square on which the chain boxes are hung．This im proved form of bexes，has manifest advan
tages over every other that has been used It is apparent，upon inspection，that any number of shuttle boxes may be added，by imply moving down upon the sword the low square，and that without impeding the speed of the lay，as the increase of gravity by in reasing the number of shuttle boxes，extend ownward towards the centre of motion of th lay．The shuttles also，on this plan，will shif with the utmost ease，whatever the numbe may be，as those on one side of the square head exactly balance those on the other，one side descending whilst the other side rises， hus producing an equipoise，without the help of extraneous weight or springs．
The harness motion comprising the second claim，is also very simple and easy，and can readily be adjusted to any variety of modes of springing the heddles to form the shed，how ever irregu：ar，but the several parts to ef fect this，are so placed in the loom as to make it difficult to display them distinctly by plate，which is in this part omitted．This inprovement，in fancy shift lox looms，is ev dently not only the most recent，but also by far the most important that has hitherto been made．
The enterprising or the large manufacture might find it advantageous to become acquain－ ted with this improvement，as the inventor be ing considerably，advanced in years，might doubtless be disposed to part with it in toto n reasonable terms．
［The inventor，Mr．Burt，is the oldest and youngest inventor and improver of check pow or looms in America．Like Dr．Cartwright，he a clergyman，with a fine mechanical taste nd great inventive faculties．The first chec loom that was set in operation in this State was in 1839 by a Mr．J．Allen，from Scotland He could not get his loom to operate success fully until he consulted Mr．Burt，and employ d an element of machinery patented by the Reverend inventor．The claim referred to as published by us in our list，was an exact copy aken from the Patent Office List which we re eive officially every week．It struck us a he time as something curious，but Mr．Burt will remember his communicating with us in 1848 about a rotary engine，and we thought had secured a patent for some improve ments on the same．We now see that we wer not clear aighted enough to point out the error at the time．
We would call the attention of our manu－ acturers to the improvements of Mr．Burt they are valuable and of the utmost conse uence．The only great and permanent relief bat we hope for our northern manufactu rers，is from improvements in machinery

New Printing Press．
The Auburn Advocate says，＂Mr．I．L．Bur ick，of Utica，has succeeded in inventing a new cylinder printing press，which is certainly far ahead of anything now in use．This prese prints both sides of the paper by one revolu tion；will print twice as fast as the Hoe＇ press，and do its work as well or better than the Adams press，and it requires but half the abor in feeding it，while the cost of the ma hine，it is believed，will be less than that of ny power press．There is one of these press－ now at work in Utica．＂
［This is a pretty strong paragraph．We cannot trust to its general correctness，and ould like to hear some other testimony on the ubject．

Respirator Cravat
A new cravat has just been brought out in Manchester，England，for the benefit of those who have weak lungs in that foggy country It consists of a cloth which allows the weare to breathe freely through it without imbibing moisture．The air inbaled is rarified by pass－ ing through it，so that it is warmer for the lungs．The moisture of the atmosphere is al o，as it were，screened，and the lungs thereby relieved from burdensome pressure．

## A Nineveh Fund．

A subscription has been set on foot，in Eng land to raise a＂Nineveh Fund＂to enable Mr Layard to prosecute his researches－the funds provided

