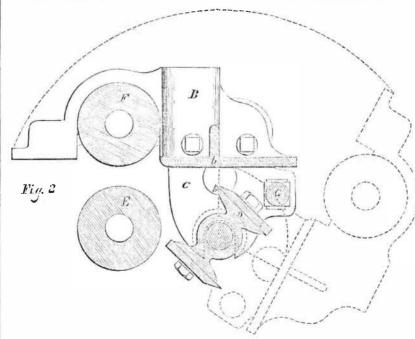


greater or less, according to the surplus wood from the rollers, its upper side rests against the feeding force. bearing plate, b, with a considerable pressure, because the weight of the plank acts upon the inclined position of the plate. This prevents

elastic pressure) as the forward part of the up- nection with the weight of the plank, to keep number of adjustable parts. per frame rises. The frame, B, together with the rear end of the plank in firm contact with the plank, is then inclined, which incline is plate b. The driving rollers occupy at all times parallel positions, thereby bearing equalof the plank. As the plank passes forward ly upon the plank, thus exerting a uniform

This planing machine differs from some others by being arranged to plane the lumber uplower roller as a lever, and also because of the on its under side. The cutting cylinder is thus enclosed, which removes to a great degree the the cutters from taking too deep a hold and annoyance from dust and liability to accident, marring the ends of the plank on entering the and which also saves the surface of the plank machine. In passing out of the machine, the 'from being marred by indentations from the



B, their ends from being scored on entering around the shaft of the cutting cylinder, and and leaving the cutters. The feeding rollers, can be swung over readily upon these centers manufacture of flour is conducted upon so to be sharpened; this leaves the frame, B, free E and F, have fixed bearings, the former upon whenever it is desirable to obtain access to the large a scale as in Oswego. The facilities for to be swung over, and when in this position the main frame, A, and the latter in the self- cutters for sharpening, &c., as stated. Changes handling grain are extensive; the elevating caadjusting frame, B, which frame is held down of thickness are made in the most convenient pacity being about thirty-six thousand barrels by the springs, N N, to the plank. The frame, manner, by raising or depressing the upper per hour, and the storing room equal to about When a plank enters between the feeding B, is connected with the stands, C, which are frame, which is alone adjustable, and the ma- two milions two hundred thousand bushels.

rollers, F E, the upper one rises (being under small roller, G, acts as a similar agent in con- chine is thus reduced to the smallest possible

The space occupied by the machine is small, being only about four by three feet, and the power required to operate it is comparatively trifling. It is especially adapted as a shop machine, where it is desirable to save power and room. It will plane lumber twenty-two inches in width and under, and from one-fourth to two and one-half inches in thickness.

One of these machines is on exhibition at the Fair of the American Institue, in the Crystal Palace, and more information may be obtained by letter addressed to Alfred Conger agent, 345 Broadway, this city.

Wild Fruits in Australia.

In this country there is almost total absence of wild fruits. There is scarcely a nut, berry, or wild fruit of any kind. No apples, no plums, no grapes. There is a species of cranberry, the fruit of which grows under the plant, but this is extremely rare; and there is a fruit called the quandong, which has a large stone, and seem to resemble a plum. Edible roots arc as few. In fact, except a very rare sort of fungus, growing in the ground, called native bread, which the natives roast and eat, and the small root called the murnong, the natives have no vegetable food. But it is a country which takes kindly to any fruit, root or vegetable that civilized man brings into it; and will doubtless, one day, be as affluent in all these riches of nature as any land on the globe. The peach flourishes; the same is the case with the vine and the fig.

Extensive Flour Mills.

There are sixteen flouring mills, with eightyfour run of stone, capable of manufacturing about ten thousand barrels of flour per day at Oswego, N. Y. There is perhaps no point in the United States, or in the world, where the

The accompanying engravings are views of the improved Wood Planing Machine for which a patent was granted to Nelson Barlow, on the first of July last.

chine, and fig. 2 is a section exhibiting the radial action of the upper frame and connections.

sists in passing planks over a cylindrical cutter of the usual form, which revolves in fixed journals in the frame of the machine, and over a fixed roller or bed in front of the cylinder, while the planks are pressed down by an improved self-adjusting frame acting upon their upper sides, and they are, by this means,

A is the main frame of the machine. It has suitable bearings to receive the shaft of the cutting cylinder, D, fig. 2., which is armed with cutters of the common form, and which revolve and cut in a direction against the advance of the plank. Inside of the bearings of cylinder D, there are other large bearings that receive a projecting hollow axle, formed upon the sides of the standards, C, through the center of which the shaft of the cylinder passes.

B is an upper frame attached to and resting upon standards, C C. This frame can be raised and depressed by adjusting screws to set it, for planks of various thicknesses. It has a plate, b, at its lower part, extending from side to side between the standards; this plate bears upon the surface of the plank while being planed. In the forward part of frame B, the upper driving roller, F, is placed; its under side being in a true line with the plate, b. The under driving roller, E, is parallel with the first, and is attached to the main frame in an unyielding position. After the plank passes the cutting cylinder, and has been reduced, it rests upon and is supported by the small roller, G. As this roller is connected with the standards, C, and they being connected to the cylinder shaft by a hollow axle, it follows that this roller occupies a fixed relative position to the under side of the plank and to the cylinder; no adjustment of it, therefore, is necessary for planks of different thicknesses. A bar may be used in place of this roller, or the table may extend out from the machine to support the planks. L is the feeding table; the part, O, to which it is attached, is connected with the cross rail of the main frame on an axle, by which it can be moved up or down, or it may be connected with the shaft of the lower roller. H, fig. 1, is a connection or link which, through the medium of the rubber spring, N. attaches the upper frame, B, to the lower frame, A. By the elastic pressure of this link, it controls the action of the upper frame, giving such an amount of bearing force upon the plank as may be necessary. This link has a lip at its lower edge that fits into a recess in the part O, and there is a recess on its upper chips, &c., and prevents, by the upper frame, | attached to the frame, A, by means of axles part to match it into the frame, B. These connections are removed when the cutters require the cutters can be sharpened or adjusted with ease.

Scientific American.



[Reported Officially for the Scientific American.] LIST OF PATENT CLAIMS Issued from the United States Patent Office FOR THE WEEK ENDING OCT. 16, 1855.

Dust DEFLECTOR FOR WINDAWS OF RAILBOAD CARS _James II. Cook, of Taunton, Mass.: 1 do not claim the application of a curved deflector on the outside of the window opening of a railway carriage, nor making the same to extend under the window and up one side thereof same

thereof, But I claim the rotary deflector or ventilator, construc-ted and made to operate substantially in the manner and for the purpose specified.

FAUGET-Albert Fuller, of Boston, Mass.: I c aim the use of the devices employed for insuring the accurate sealing of the valve, when actuated by a crank, or other positive motion, the same consisting of the screw red, K, traveling in the female screw of the nut or eye formed on the valve stem, and being cut, constructed, and arranged with regard to the screw shaft, I, so as to operate with the same, as described, whereby the valve and valve stem, when the plug is drawn upon its seat, are brought into the exact position required for enabling the valve to find its proper seat. proper seat.

BENERI HORK-A. Hotchkin, of Schenevus, N. Y : I claim the construction of the bench hook as shown and described, viz., having the catch or stop, C, attached by a joint, i, to a plate, B, said eatch or stop, being provided with a shank, d, against which a spiral spiral, gracts, and also provided with a segment bar. D. having holes, h, in one side, in which a syring paw, E, catches, and retains the catch or stop in the desired position.

[Benchhook is the name given by carpenters to the little sput of iron against which they place one end of the stuff they happen to be planing, to prevent the same from slipping. Some carpenters drive in a nail at the head of their benches, and make it serve as a hook ; others use a hooked spike. In both cases there is more or less trouble to lift the hook and set it to suit different kinds of work. The present improvement consists of a small metallic frame, having in its center a pivoted tongue-like the tongue of a buckle ; the frame is let in and fastened flush with the bench. The tongue serves as the hook, and as it may be instantly elevated or depressed by the finger, it manifestly possesses much advantage over the common hoolts in point of convenience. The lower side of the tougue is notched, like a rack, and there is a spring pawl to match the same. This part of the contrivance is to hold the tongue firm in any desired position.]

hold the tongue firm in any desired position.] PROJECTLE FOR ORDMANCE—Andrew Hotchkiss, of Sharon, Uonn.: I Chim, first, constructing a shot or projectile capable of teing fired from a camon having file grooves, said shot consisting of three parts, two of which parts are of hard metal, and the other of some flex-ible expand we material, in the firm of a hand or ring, at-tached to or e of the hard metal parts, and overlapping the edge of the other, in such a manner that either by the sate of loading or of firing, or of both, the said ring shall be so expand, do of site nade to hit he bore, as described. Necond, I claim the tail-piece for securing the cap, on the for-ward motion, in the manner described.

EXCATATORS-Benj. Hancock, of Troy. N. Y.: I claim, rst, the dumping scoop, constructed, arranged, and opera-d substantially as described, and for the purpose speci-Second, in combination with the above, the movable and adjustable frame, as described, for the purposes set forth

Forth VISES-Jasper Johnson, of Geneseo. N. Y.:]I disclaim the construction of vises where a distinct adjustment is requisite for grasping the article, previous to the tight-ing of the laws by lever power, as in the patented vise of Cove, and the rejected vise of Pardee, such constituting no part of my invention. But I claim the combination of lever, F f i, swinging lugs, I, and rack, E, with one jaw. A, fixed, and one, B, movable, in the direction of the rack, arranged and operat-ing as specified, to grasp and tighten by one continuous movement of jaw B, and admitting of charge of capacity without adjustment therefor.

WASHDARDS-JOS. Kasch. of Waterloo, N. Y.: I disclaim. expressly. the curving of the corrugation. as patented by Lester Budler in 1832. But I claim constructing the operating face of wash-boards of a lat-rally depressed and contrally elevated enrougated surface, substantially as specified. for increas-ing the effective operation of the board, in the manner set forth.

SEED PLANTERS-Ebenezer McCormick of Connells-ville, Pa.: 1 claim so arranging the drag, B, wich its link a and guides, and the wheels. A A, with regard to a s-eding and covring apparatus, such as described, as that they shall be guides and markers for directing the dropping of the seed at stated intervals, asset forth.

WRINGERS FOR CLOTHES-John McLaughlin of Steu-benville, O. : I claim the serrated rotary drum, in com-bilation with the ratchet levers, C and E, constructed, arranged, and operating as and for the purposes specified.

SEWING MACHINES-Isaac M. Singer, of New York City: I claim the method, substantially as described, of protering the medic from all injury by the incremention of a movable shield between the needle and shuttle, which is removed after the needle has descended, to permitting shuttle to pass between the needle and the thread, as se forth.

[This appears to be a very useful invention. Mr. Singer is a most prolific genius in the way of sowing ma chines. His improvements are generally good and prac tical.]

GRAIN SEPARATORS-Beij, Wright & John Bean, of Hudson, Mich. : We do not claim the cylinder, concave, and fan separately, for they have been previously used. But we claim the employment or use of the rotating screws. B D. and shoe, b, when arranged substantially as shown and described, whereave the straw is carried th ough the screens and the grain shaken therefrom within the screens, as described.

[This separator is compose dof a revolving screen having a flit screen of the common kind extending through its interior, from end to end. The grain and chaff to be separated are fed on the flat screen, which is inclined and made rapidly to vibrate ; this vibration causes the straw to pass through, out of the machine, while the grain and finer the flat screen, and the light dust, as fast as it drops, is swept away. The grain rolls on the revolving screen long enough to sift out any remaining impurities, and finally pours out, at one end of the machine, in a clean pile by itself. This is a very simple, cheap, and effective separaor.]

CHURNS-Lewis P. Pease, of Mount Carmel, Ill., I claim the winged dasher, formed by two series of curved paddle, as described, rotating around axles projecting outward, and slightly upward, from a vertical shart, the said paddles of each series forming a conic frustum, re-volving with its lower edge parallel to the tub bottom.

BREECH LOADING FIRE ARMS-H. B. Weaver, of South Windham, Conn.: first, I claim combining the hammer with the laterally swinging chamber, for the purpose of eff-cting the simultaneous opening of the chamber and cocking of the hammer by means of the lever, D, the pin, K, slide, d, and lever arm, c, all operating substantially as described, whether the said slide, d, be a priming slide, or simply employed to connect the chamber, A, with the lever, D. Second, I claim combining the priming slide d with

Second, I claim combining the priming slide, d, with the lever, D. Second, I claim combining the priming slide, d, with the lever, D, and the hammer, F, by means of a pin, l, attached to the lever, working in a slot, n, in the slide, or a link attached thereio, so that the lever, D, will draw back the hammer before moving the slide far enough to allow the pin, h, or its equivalent, through which the hammer strikes the cap, to move out of the receiving hole in the slide before the slide is acted upon by the lever, substantially as set forth.

[Inthis improvement there is a movable chamber a the breech of the gun for receiving the cartridge, the chamber being hinged so as to open up, laterally, like the lid of a suuff box. The opening and closing of the cham-Ler is effected by means of a trigger guard lever located underneath the stock, the same as in most of the breech loading fire arms, There is also a very ingenious self-acting contrivance

for putting the percussion caps upon the nipple.

By the act of opening the cartridge chamber the hammen is cocked and a cap placed upon the nipple ; all that re mains to be done is to slip the charge into the chamber and close the same, when the piece is ready for instant discharge.

The operations of opening the chamber, cocking, cap ping, &c., are performed with ease and precision. The mechanism occupies but little space, is simple, and cheap. We regard it as an excellent improvement.]

IMPACT WATER WIFELL-Hiram Morris, Elijah K. Goron, K. Edward Saoger, of Crawford County, Pa.: we claim. first. the buckets. so constructed as to be adjusted and movable, to open and closs the issues as may be de-sized, by means of the circular grooves in the rims of the wheel and flanges on the buckets, and the fastening the buckets in any desired position by means of a latch and catch, in the manner described. Second, we claim a circular concave packing ring and decking, with the adjusting box, constructed in the man-ner described.

Washing Machiness—Chas, Love, of Peru, III.: I make no claim to rollers or brushes, as applied to washing ma-chines and separately considered. But I claim the construction within the tube and above its bottom, of a rack composed of radial fluted comes, each capable of an independent rotation, arranged and sup-ported as described, and operating asset forth, for facilitat ing the washing operation.

ported as described, and operating assectorin, for hardinating the washing operation. KENTTING MACHINE SS-John II. Doolittle, of Waterbury, Conn., assignor to the "American: Hosiery Co." of same place: I claim the method of producing the field motion by means of a field bar with teeth formed upon it, of pro-per shape, to engage with, and move or feed the series of medles, substantially as described. Second, I claim the method of reversing the feed mo-tion by means of the inclined planes, k and 1, spring bars, m and n, swinging bar, p, and the can grooves. A and i, when constructed, arranged, connected, and made to operate in the manner substantially as described. Third, I claim attaching the blocks or inclined planes, I and m, to the needles in such a manner that they will al-ways operate at the end of the course, without rofterance to the hunder of needles used, unstantially as described. Fourth, I claim the method of working the counting ap-paratus, in combination with the method of throwing the machine out of gear, when the parts are arranged, con-structed, and made to operate, substantially as described. SEED PLANEESS, F. G. Wynkoop, (asignor to II). La

SEED PLANTERS.-F. G. Wynkoop, (assignor to H. L. Edson,) of Corning, N. Y.: I claim the construction and arrangementof the spades, C G, with the tube, L, when attached to and operated upon by the side, G, for the purposes above described.

purposes above described. INKIVE APPARATUSTOR CARD PRINTING PRESSES— Danl, K. Winder, of Cincinnaii, O: 1 Claim, first, the double armed rock shaft. S. and outward pressing roller frame, G. or their equivalents, in combination with the platten and the springs actuating the arm, in, of solid rock shaft, constructed, arranged, and operating substantially as, and for the purposes specified. Becoud, the alwaye mechanism for operating the inking roller, combined with the supply roller, E, actuated by the movement of the platten, substantially as specified.

EXTENSION REACH FOR CARRIAGES—Edwin Wilson, of Prattsburg, N. Y.: I claim connecting the reach, C, to the center pluce, F, of the hounds, G, by means of the cogged bars, D D, slide, E, and clasp, I, constructed and arranged substantially as shown and described.

[In common !umber wagons the ends of the reaches overlap, and are secured together by means of a pin : in order to render the length of the reaches changeable. their ends are bored with holes, placed at different distances, through which the pin passes. Reaches thus bored and fastened are weak, and frequently break down.

The present improvement consists in placing a series of rack teeth on the ends of each reach, so arranged that the teeth of one rack fit into those of the other; when the two racks are united a sliding ring collar is employed to hold them together. In order to change the length of reaches, it is simply requisite to loosen the collar, set the ricks as desired, and bind them again with the collar. Reaches thus furnished are not bored, and are therefore much stronger; the coupling is also much more rigid than the old plan. This is a good invention and worthy of extensive introduction.]

CASTING TEAPOT SPOURS AND HANDLES-Theodore Ackerman (assignor to H. H. Homan, Wm. Mille, and Theodore Ackerman,) of Cincinnati, O.: I claim the use of an inner, non-conducting layer to the metallic interior surface of the cope or sprue gate of a teapot spout mold, or analagous object, in the manner and for the purpose described.

COOKING STOVES-James Wager, of Troy, N. Y., two designs. PARLOR STOVE PLATES-James Wager, of Troy, N. Y.

To Pay Out a Submarine Cable.

DESIGNS.

MESSRS. EDITORS-As you have become the thoughts and ideas are communicated to the think, would have prevented the loss of the causes. Heat alters the original mode of ar-It is this: The cable should be "paid out" at, organism, no portion of an animal, vegetable, chaff fall throach on to the revolving screen. A blast of or near the center, and through the bottom of or plant, is capable, after the extinction of vital in a vessel will give the idea of communication | air and humidity exercise upon it." through the bottom. With one or more sheaves fixed in the box, the telegraph could be reeled manding thorough investigation; its present G. B. Jr.

[For the Scientific American.] On Preserving Fruit. (Concluded from page 43.)

Atmospheric changes have very great, if not the most powerful of all influences detrimental to the preservation of fruits. First, as regards their calorific effects; second, their hygrometrical. In the former respect, the expansion and condensation occasioned by the rise and fall of temperature, must work a change in the state of the juices, doubtless often at variance with the gradual chemical change which those juices naturally undergo. Hence, those fruits that are most exposed to vicissitudes of temperature, are most apt to fail in attaining their full sugary mellow perfection. Again, when warm weather suddenly succeeds cold, the air in the room is of a higher degree of temperature than the various substances, until such time as the latter acquire from the former an equality of temperature. Fruit, &c., from its coldness, acts as a condenser of the vapor existing in the warmer atmosphere by which it is surrounded. The surface of the fruit consequently becomes covered with a great deposition of moisture, as will be the case with a glass filled with water colder than the atmosphere of the room into which it is brought. It is a known fact that fruits and vegetables possess a temperature higher in winter than that of the air generally by which they are surrounded, this, as well as other causes given, produces chemical action in different degrees. In some substances eremacausis, or decay, is the result. An atmosphere saturated with moisture will cause these to take place in fruit and vegetables. As soon as the action of the air ceases, that is, as soon as deprived of oxygen, the humas suffers no further changes. Substances that contain nitrogen are most prone to putrefaction.

When the decomposition of such substances is effected, with the assistance of water, their nitrogen is invariably liberated in the form of ammonia. Hydrocyanic acid and water when brought into contact with muriatic, are decomposed into formic acid and ammonia. Charcoal has the power of condensing ammonia and formic acid before reaching the freezing point. Chloride of calcium has also the property of absorbing a great quantity of moisture (double its own weight,) and then becomes liquid; in this state it is important to save the liquid, as it may be put in a brass kettle, and placed over the fire, where it will soon evaporate to perfect dryness, and be as good as before. This does not absorb the carbonic acid set free by the fruits-it is important that this be retained in the atmosphere. Light is also found to be injurious to fruits. All menhaving experience, agree that they keep best in total darkness .-This arises from a specific stimulus being exercised upon the vegetable tissue by this agent. Light causes evaporation; as soon as it is withdrawn it ceases. Guy Lussac has shown that the atmosphere coming in contact for a short time with fruit, &c., will cause fermentation; this would continue, though not long, exposed to the air. Decay is prevented by cold, dryness, &c., many salts and absorbents. He says, "It is a fixed rule, without exception, whatever may be the cause that produces the decomposition, that every azotized constituent of animal or vegetable organism enters spontaneously into putrefaction when exposed to moisture and a high temperature."

Eremacausis or decay takes place in organic substances in contact with air or oxygen, but these changes do not occur when water is excluded, or when the substances are exposed to the temperature of 32 degs. Liebig says, "the of using, for a limited period, my invention, for great medium by which new mechanical phenomena of animal and vegetable life are the purpose of adding the Atkins' Self-Raker peculiar to themselves; they stand in certain public mind, I will describe a plan, which, I relations to each other, and depend on certain telegraph submarine cable while being laid rangement of the atoms, and consequently the down between Newfoundland and Cape Breton | equilibrium of their mutual attraction. No air from a fan is sent along through the machine, beaeath the ship. The box for working a center-board energy, of resisting the chemical action which

> Preservation of fruits is a subject now deoff and out handsomely, either in a smooth or and prospective importance, in a commercial rough sea. The weight and strain would al- | point of view, is worthy of serious and immeways be where they should be, viz.: at a point diate attention. Millions of bushels of choice in the vessel nearer stationary than any other. fruit are at present rotting on the ground, and thus large quantities of good nutritious food is

lost to the human family. The keeping of the fruits in winter, and the packing of them for distant markets, are questions that concern deeply the extensive fruit growers in this country. The fruit garden cannot give the results expected from it if we are deprived of its productsfrom February till July, when the earliest fruits begin to ripen. This question concerns producers and consumers, also those who deal in fruits, and who, without proper modes of keeping, are exposed to great losses. How very desirable for all living in large cities that the present surplus fruits be preserved till next spring, so that they might have the comfort of having cheap grapes, pears, apples, pumpkins, &c. All this will yet be accomplished. From what has been collected from various sources. we may conclude that a method of preventing the decomposition of the fra t without the use of any substance which shall injure its flavor. either by the addition of a new flavor or the destruction of the natural one, is what is wanted. Many methods are useful on a small scale, but it appears to me the trouble and expense attending is too much for the quantity preserved. In No. 45, SCIENITIC AMERICAN for 1855, the principles and construction of my Preservatory are explained and illustrated; apples and pears should be packed in good oak barrels, resting on their sides in tiers not more than four feet high. If the ice be kept as directed, the temperature will be from 40 degs. to 45 degs. In proportion as the seven following conditions are fulfilled in the fruit room, will the result be satisfactory :- First, that the temperature be 10 degs. above freezing. Second, that it be uniformly equal. Third, that the fruit room be dark. Fourth, that the atmosphere be more dry than humid. Fifth, that the carbonic acid disengaged from the fruit be retained in the room. Sixth, that the air be sweet,-the arrangement of the Preservatory with absorbents or screen will keep it pure and wholesome. Seventh, that the pressure of the fruits so placed is reduced, as far as possible. All these are attained by the Preservatory, and by no other method. Some of the appies, of various perishable kinds, preserved iu this way, were given, in June last, to the editors of the Tribune,, Times, Sun, and SCIENTIFIC AMER-ICAN, and were spoken of by them, at the time, in the most flattering terms. I hope fruit growers and consumers will thoroughly investigate, and practice the best mode. "Hold fast to that which is good," so that sound fruit, having its aroma retained, not substituted by alcohol or sugar, be plentiful at all seasons of the year. Also dairy products-eggs, meats, &c., &c. All

these are kept fresh by using the Preservatory. W. D. PARKER, Patentee, No. 201 Washington street, New York.

Hussey's Reaper and Atkins' Automatic Raker. MESSRS. EDITORS-Your remarks on page 29, this Volume SCIENTIFIC AMERICAN, under the head of "Atkins' Self-Raker in France," is calculated to do me injustice. The term Atkins' Self-Raker will be understood by ninety-nine-hundredths of your readers to mean the whole machine; if not so, it most effectually leaves me out of the question. It is very true that I did not invent one particle of the Automaton Rake of Mr. Atkins'; it is equally true that this Automaton Rake is used on a machine invented by myself. Deprive the machine of Mr. Atkins' invention, and it would still be a "Hussey Reaper." Deprive it of my invention, and it would be no reaper at all. I conveyed to J. S. Wright, of Chicago, by written agreement, several years ago, the privilege to it.

Knowing your love for fair play, you will et this matter right. OBED HUSSEY. Baltimore, Md., Oct. 16, 1855.

Good Shooting.

A great shooting match, at pigeons, on the wing, took place on the Sth inst., at Cincinnati, Ohio, between W. King, of Georgia, and R. Duncan, of Louisville, Ky. Mr. Duncan was the victor. Each party hadseventy-fiveshots, two pigeons being let out at each shot. Duncan shot 130 birds, and missed 20; King shot 129 birds and missed 21. The wager was \$10,000, and the money was lost by a single bird only.

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